Jonthly

July 1976



Federal Energy Administration

National Energy Information Center

Washington D.C. 20461

Contents

rart I — Overview	٦
Part 2 — Crude Oil and Refined Products	Ę
Crude Oil	6
Total Refined Petroleum Products	
Motor Gasoline	10
Jet Fuel	12
Distillate Fuel Oil	14
Residual Fuel Oil	16
Natural Gas Liquids	18
U.S. Petroleum Supply and Demand — 1976	20
Part 3 — Natural Gas	21
Part 4 — Coal	25
Bituminous and Lignite	26
Anthracite	28
Part 5 — Electric Utilities	29
Cooling Degree-Days	34
Part 6 — Nuclear Power	37
Part 7 — Consumption	41
Energy Consumption	42
Petroleum Consumption and Forecast	47
Energy Conservation Indicators	48
Part 8 — Resource Development	49
Oil and Gas Exploration	50
Part 9 — Price	53
Motor Gasoline	54
Heating Oil	58
Crude Oil	62
Natural Gas	68
Utility Fossil Fuels	70
Part 10 — International	73
Petroleum Consumption	74
Crude Oil Production	76
Definitions	77
Explanatory Notes	81
Units of Measure	84

The Monthly Energy Review is prepared in the office of Policy and Analysis under the general supervision of John D. Curtis, Office of Energy Systems Data.

Editor: Judy Gaynor

Publications Coordinator: Elizabeth A. Snyder

Editorial Review: Patricia M. Jacobus

Graphics Review: Office of Communications

and Public Affairs Overview: Judy Gaynor

Crude Petroleum and Products: David A. Carleton,

Naomi Kawin

Natural Gas Liquids, Natural Gas: James W. McCarrick

Coal: Patricia Newman

Electric Utilities: Thomas Murphy Degree-Days: John H. Roberts Nuclear Power: Andrew W. Reynolds Consumption: John H. Roberts

Petroleum Consumption Forecast: Christopher

B. Alt

Energy Conservation Indicators: Daniel H.

Wedderburn

Resource Development: Judy Gaynor

Price: Christopher B. Bordeaux, Les Byers, Brian L. Connor, William Davis, William Gillespie,

Annie Whatley

International: Elizabeth Bauer

The cooperation of other government agencies and private establishments which provide much of the data appearing in this publication is gratefully acknowledged.

This periodical is available on a subscription basis from the following:

Subscriptions
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

For addresses inside the United States, the cost is \$36 per subscription (12 issues). For addresses outside the United States, the cost is \$50 per subscription.

Correspondence regarding editorial matters should be addressed to:

Editor, Monthly Energy Review National Energy Information Center Federal Energy Administration Washington, D.C. 20461

Feature Articles appearing in previous issues:

ber 1975

Energy Consumption – March 1975

Nuclear Power -- April 1975

The Price of Crude Oil -- June 1975

U.S. Coal Resources and Reserves -- July 1975

Propane, A National Energy Resource -- Septem-

Short-Term Energy Supply and Demand Forecasting at FEA - October 1975

Curtailments of Natural Gas Service — January 1976

Home Heating Conservation Alternatives and the Solar Collector Industry — March 1976

During May, production of energy in the United States averaged 152 trillion Btu per day (the equivalent of 27.9 million barrels per day of crude oil), down about 2 percent from the average for April, Crude oil production increased for the third consecutive month in May to 8.27 million barrels per day, from a low of 8,20 million barrels in February. Average daily crude oil output for the period January through May, however, was 2.7 percent lower than the output level for the corresponding period in 1975. Daily natural gas production in May was essentially unchanged from the previous month, but compared with the first 5 months of 1975, the production rate for the corresponding months of this year has declined 3.8 percent. Average daily coal production in May dropped 5 percent below the rate for April, although cumulative production for the first 5 months of the year remained over. 3 percent greater than the production rate for the same months in 1975.

May fossil fuel imports declined seasonally to an average of 38 trillion Btu per day (or 6.6 million barrels per day of crude oil equivalent). Refined petroleum product imports dropped more than 17 percent during the month to 1.28 million barrels per day, the lowest level since the summer of 1968. Crude oil imports declined 3 percent to 4.85 million barrels per day, and natural gas imports were down 5 percent. Fossil fuel imports for the first 5 months of the year, however, remained nearly 16 percent greater than imports during the same period in 1975.

Following the trend for the year, the United States consumed around 1 percent more energy in April than during the corresponding period in both 1975 and 1974. Energy consumption averaged 194 trillion Btu per day during the month (the equivalent of 33.4 million barrels per day of crude oil), 47 percent of which was refined petroleum products. Natural gas supplied 28 percent of the energy used in April, coal represented 18 percent, and the balance was met by hydroelectric and nuclear electric power.

In May, the first month of the air-conditioning season, the Nation accumulated 52.2 percent fewer cooling degree-days than last May and 36.7 percent fewer than normal, reflecting relatively cool temperatures.

Electric utilities produced 5.4 percent more power in May 1976 than in May 1975. This increase was somewhat less than the 6.6-percent growth in daily electricity output posted during the first 4 months of the year.

Retail gasoline prices increased in May for the first time since September 1975. The average selling price for regular gasoline at full service stations was 57.4 cents per gallon, 0.8 cent higher than the average price for April. The average dealer margin dropped to 7.4 cents per gallon during the month, which was the lowest level in 3 years.

Oil and gas exploration activity was seasonally higher during May. The number of rotary drilling rigs in operation increased for the first time in 5 months to 1,496 from 1.480 in April, Compared with last May, however, the rig count was down 6.0 percent. The number of wells completed during May totaled 3,262, 33.6 percent greater than the number drilled in May 1975 and 12.4 percent greater than the level for the previous month. Seismic exploration activity, which has been on the decline since last August, also gained in May. The number of seismic crews prospecting for new oil and gas deposits rose by 9 to 247 (226 land, 21 marine).

Crude oil production in the nations belonging to the Organization of Petroleum Exporting Countries dropped about 0.5 million barrels per day in April, due mainly to a production cutback by Iraq.

Overview

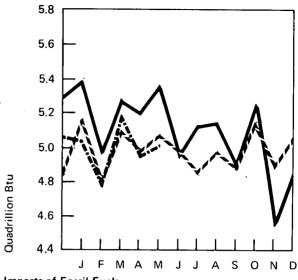
		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy ***
		Quadrill	ion (10 ^{1 5}) Btu	
1973	January February March April May June July August September October November December	5.367 4.937 5.370 5.112 5.311 5.070 5.084 5.382 5.035 5.300 5.138 5.276 62.373	1.167 1.163 1.303 1.078 1.154 1.122 1.209 1.291 1.217 1.303 1.312 1.199 14.519	7.140 6.507 6.426 5.857 5.987 5.707 5.851 6.092 5.677 6.080 6.431 6.797
1974	January February March April May June July August September October November December	5.391 4.978 5.293 5.198 5.373 4.944 5.140 5.155 4.999 5.263 4.540 4.845 61.119	1.072 0.945 1.053 1.142 1.266 1.197 1.266 1.237 1.138 1.210 1.284 1.305	6.792 6.204 6.262 5.758 5.753 5.534 5.866 5.899 5.596 6.065 6.126 6.729 72.584
1975	January February March April May June July August September October November December	5.179 4.793 5.116 4.982 R5.099 4.991 4.849 4.943 4.889 5.166 4.883 5.063	1.330 1.093 1.128 0.971 1.024 1.030 1.168 1.214 1.273 1.277 1.200 1.216	6.819 6.107 6.293 5.775 5.373 5.326 5.575 5.653 5.410 5.832 5.750 6.805
1976	January February March April May TOTAL	5.040 R4.778 R†5.192 R†4.949 †5.024 24.983 (5 months)	1.286 R†1.332 R†1.411 R†1.234 †1.193 6.454 (5 months)	R7.178 R†6.194 R†6.378 †5.805 25.554 (4 months)

^{*}See Explanatory Note 1.
**See Explanatory Note 2.
***See Explanatory Note 3.

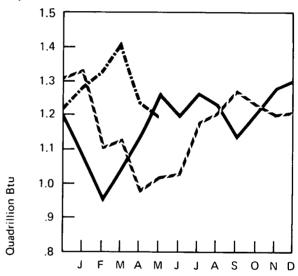
[†]Preliminary data.

R=Revised data.

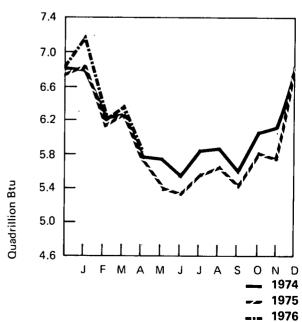
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



Crude Petroleum

Crude oil production rose slightly in May to 8,274 thousand barrels per day. The January-May average was 8,229 thousand barrels per day, down only 36,000 barrels per day from the average for the last 5 months of 1975. This relatively small drop in production continues to indicate a slowing of the rate of decline in domestic crude oil production.

Imports of crude oil fell for the second straight month because crude oil stocks were at near record levels (285.4 million barrels).

Because of the need to increase motor gasoline production to meet anticipated record-high summer driving requirements, crude oil input to refineries rose to 12,913 thousand barrels per day in May. Refineries generally maximize motor gasoline production during the early summer months. Crude input during the first 5 months of the year was 6.5 percent higher than during the corresponding period of 1975.

Refinery utilization in May was 87 percent of operable capacity, up from 84.5 percent in April.

Total Refined Petroleum Products

Total refined products domestic demand was seasonally lower in May (16,121 thousand barrels per day). Motor gasoline demand was 7,112 thousand barrels per day, down contraseasonally from April (probably indicating inventory buildup at secondary terminals and at retail facilities), but was 3.5 percent greater than demand last May. Total product demand for the first 5 months of 1976 was 4.2 percent higher than the level for the corresponding period in 1975.

Refined product imports averaged 1,282 thousand barrels per day in May, the lowest level since the summer of 1968, as the United States continued to meet a larger share of its demand with domestic refinery output.

Natural Gas Liquids

Domestic demand for natural gas liquids in February was nearly equal to demand in February 1975. For the first 2 months of

the year, demand averaged 5.8 percent above the average for the same period in 1975.

NGL production during the first 2 months of 1976 was 0.9 percent below production during the same months of 1975.

Imports were up 49.2 percent in February, and up 14.9 percent for the first 2 months of 1976, from the comparable 1975 levels.

NGL stocks at the end of February were 5.6 percent above the level at the end of February 1975.

Part 2

Crude Oil

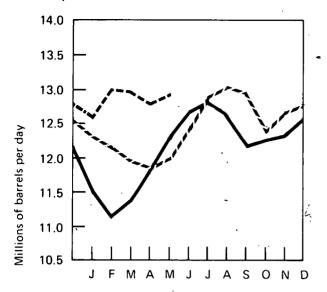
		Crude Input Refineries	t to	Domestic Production	n	Imports	٠,	Stocks	,
			Thous	ands of bar	rels per day			Thousands of barrels	
	•	вом '	API	BOM,	API	вом	API	вом	API
1973	January February March April May June July August September October November December	12,190 12,187 12,201 12,208 12,281 12,862 12,750 12,635 12,560 12,758 12,374 12,150		9,176 9,395 9,272 9,292 9,262 9,214 9,217 9,169 9,065 9,224 9,161 9,063		2,732 2,873 3,162 3,049 3,215 3,220 3,501 3,593 3,471 3,739 3,452 2,891		237,469 235,362 244,131 248,783 257,867 248,857 243,673 248,314 241,276 246,297 249,998 242,478	
	AVERAGE	12,431		9,208		3,244			
1974	January February March April May June July August September October November December AVERAGE	11,491 11,102 11,355 11,823 12,333 12,697 12,811 12,644 12,124 12,286 12,332 12,519 12,133		8,934 9,142 8,965 8,954 8,911 8,780 8,780 8,699 8,443 8,611 8,569 8,527 8,774		2,382 2,248 2,462 3,267 3,908 3,925 4,091 3,924 3,797 3,810 3,958 3,869 3,477		233,035 240,723 244,665 256,385 269,455 268,765 268,686 264,840 266,726 269,437 271,144 265,020	
1975	January February March April May June July August September October November December AVERAGE	12,297 12,135 11,905 11,803 11,983 12,417 12,915 13,046 12,945 12,365 12,689 12,779		8,439 8,575 8,476 8,440 8,371 8,409 8,327 8,237 8,266 8,310 8,271 8,239 8,362		4,029 3,828 3,656 3,378 3,486 3,905 4,193 4,581 4,689 4,389 4,623 4,476 4,105		270,462 276,755 279,989 284,990 276,110 276,132 264,157 256,616 259,446 269,584 270,950 271,354	,
1976		12,560		8,211		R4,595		289,296	
13/0	January February March April May	12,500	13,011 12,908 12,791 12,913	8,196	**8,199 8,265 8,274	114,000	4,958 5,256 R5,000 4,851	200,200	266,477 277,220 279,133 282,340
	AVERAGE (5 months)		12,835		8,229		4,928		

^{*}Data series for crude oil stocks has been revised to include stocks held on leases.

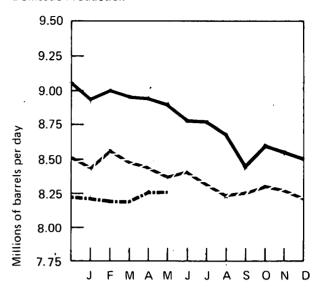
Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

^{**}FEA estimate. R=Revised data.

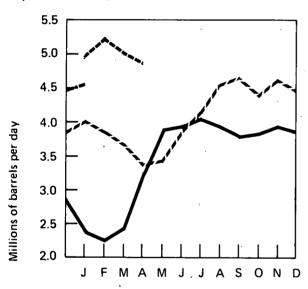
Crude Input to Refineries



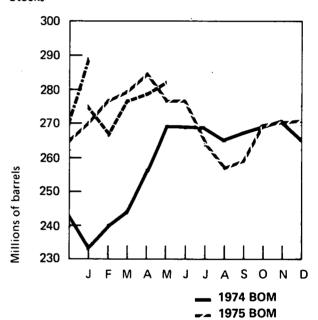
Domestic Production



Imports



Stocks



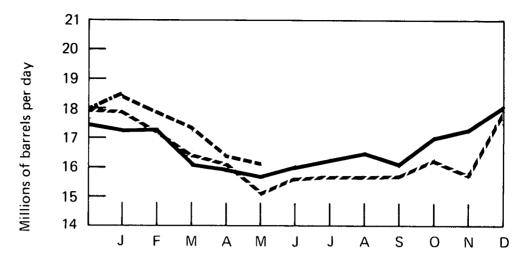
Total Refined Petroleum Products

		Domestic Demand		Imports	
				barrels per day	•
1973	January	BOM 18,713	API	BOM 3,125	API
1373	February March April May June July August September October November December AVERAGE	19,094 17,216 15,921 16,626 16,481 16,372 17,499 16,656 17,202 18,492 17,538		3,635 3,448 2,545 2,626 2,670 2,678 2,999 2,941 2,894 3,470 3,164 3,012	
1974	January February March April May June July August September October November December AVERAGE	17,286 17,366 16,104 15,929 15,726 16,117 16,349 16,550 16,024 17,050 17,351 18,013		2,989 2,968 2,812 2,713 2,586 2,435 2,445 2,438 2,255 2,366 2,840 2,798 2,635	
1975	January February March April May June July August September October November December AVERAGE	17,983 17,248 16,316 16,041 15,118 15,611 15,762 15,767 15,769 16,344 15,721 17,987		2,811 2,348 2,074 1,655 1,690 1,502 1,789 1,681 2,116 1,907 1,739 1,751	
1976	January February March April May	R18,543	17,796 17,325 16,357 16,121	R2,016	R2,395 2,035 1,553 1,282
	AVERAGE (5 months)		17,227		1,851

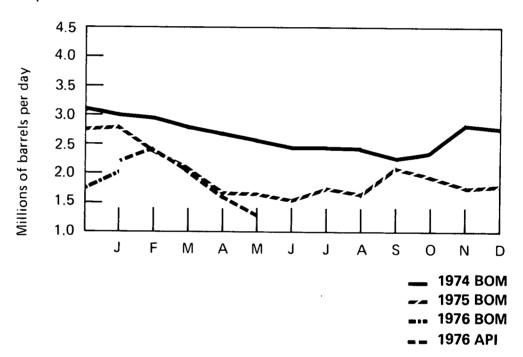
Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

^{*}See definitions. R=Revised data.

Domestic Demand



Imports -

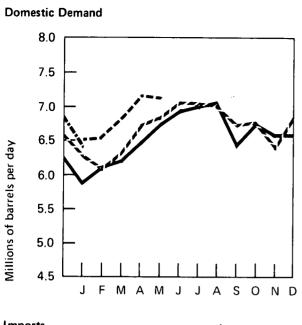


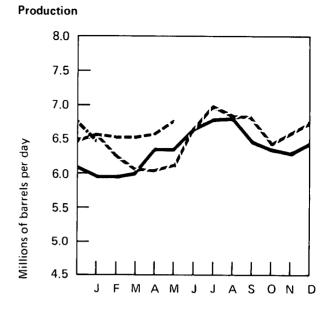
Motor Gasoline

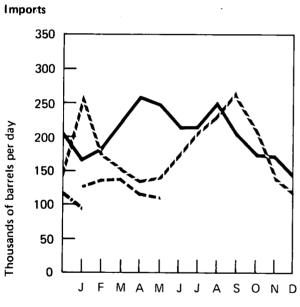
		Domestic Demand		Production	n*	Imports		Stocks*	
				Thousands o	f barrels per	r day		Thousands of barrels	
		вом	API	вом	API	вом	API	вом	API
1973	January February March April May June July August September October November December	6,118 6,437 6,513 6,541 6,907 6,964 7,023 7,257 6,581 6,677 6,823 6,237 6,674		6,341 6,855 6,150 6,377 6,714 6,993 6,986 6,880 6,619 6,621 6,375 6,099		59 95 71 63 101 174 133 164 127 194 216 202		221,823 216,367 207,581 204,708 202,081 208,374 211,488 205,122 210,278 214,525 207,343 209,395	
1974	January February March April May June July August September October November December, AVERAGE	5,804 6,100 6,162 6,457 6,745 6,919 6,959 7,061 6,388 6,712 6,547 6,558		5,900 5,969 5,982 6,311 6,329 6,663 6,793 6,815 6,453 6,336 6,292 6,419 6,358		163 184 225 260 250 211 212 253 202 171 174 141		217,463 219,058 220,307 223,752 218,670 217,381 218,838 218,951 227,031 220,748 218,385 224,719	
1975	January February March April May June July August September October November December	6,206 6,096 6,326 6,718 6,871 7,076 7,041 7,008 6,729 6,778 6,389 6,808 6,674		6,509 6,276 6,070 6,046 6,126 6,669 7,003 6,872 6,822 6,409 6,602 6,786 6,518		262 171 150 133 142 177 209 232 269 207 139 119		242,285 251,915 248,685 232,556 213,947 207,114 212,454 215,480 226,447 221,493 232,091 234,925	
1976	January February March April May	6,398	6,515 6,808 7,144 7,112	6,483 ,	6,501 6,502 6,596 6,798	92	138 139 112 110	240,464	243,527 238,302 225,160 218,545
	AVERAGE (5 months)		6,797		6,577		118		

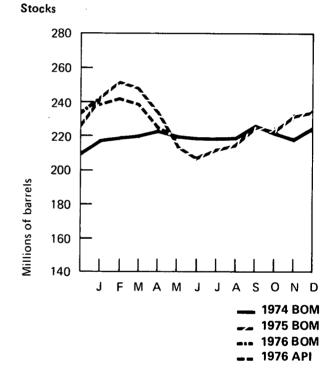
Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

^{*}See definitions







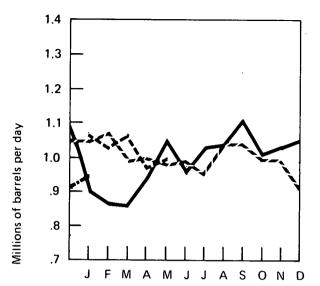


Jet Fuel

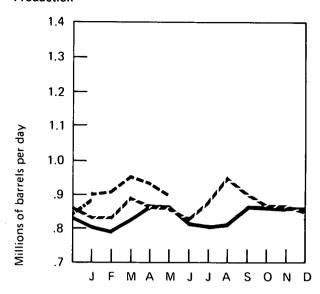
		Domestic Demand		Productio	on	Imports		Stocks	
				Thousands o	f barrels pe	r day		Thousands of barrels	
		вом	API	вом	API	вом	API	вом	API
1973	January February March April May June July August September October November December AVERAGE	1,110 1,090 994 1,015 1,112 1,007 1,046 1,049 1,070 1,104 1,025 1,087 1,087		864 898 917 887 840 836 825 844 847 875 852 830		231 221 152 145 211 164 232 180 235 246 275 259		24,814 25,437 27,585 27,881 25,825 25,447 25,661 24,851 25,149 25,577 28,539 28,544	
1974	January February March April May June July August September October November December AVERAGE	895 860 956 941 1,053 952 1,028 1,031 1,109 1,011 1,032 1,043 993		800 783 832 868 868 810 802 805 867 868 863 861		136 75 139 132 205 141 214 206 217 161 140 178		29,732 29,617 29,996 31,725 32,324 32,200 31,671 30,989 30,186 30,564 29,616 29,776	
1975	January February March April May June July August September October November December	1,041 1,075 982 1,006 977 989 954 1,046 1,040 997 999 911		831 835 896 864 861 839 883 958 907 863 864 849		229 200 130 138 133 106 88 132 140 106 89 109		30,321 29,133 30,456 30,263 30,719 29,337 29,798 31,103 31,291 30,410 28,977 30,380	
1976	January February March April May AVERAGE (5 months)	948	1,022 1,069 965 1,002 1,001	889	912 959 935 903 920	69	120 128 95 96 101	30,618	29,237 29,791 31,718 31,541

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

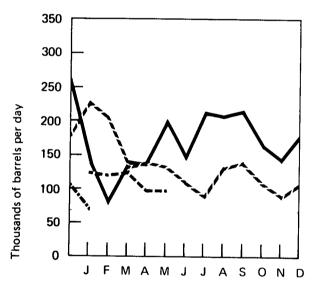
Domestic Demand



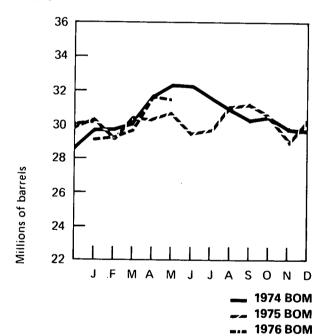
Production



Imports



Stocks



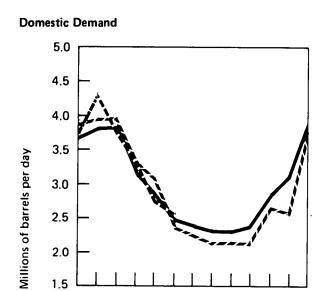
- 1976 API

Distillate Fuel Oil

		Domestic Demand		Production	ı *	Imports		Stocks*	
				Thousands of	barrels per d	ay .		Thousands of barrels	
		BOM	API	вом	API	BOM	API	вом	API
1973	January February March April May June July August September October November December AVERAGE	4,138 4,302 3,337 2,635 2,673 2,419 2,328 2,555 2,675 2,930 3,508 3,690 3,092		3,028 2,937 2,667 2,510 2,544 2,825 2,752 2,801 2,813 2,911 2,922 3,136 2,820		364 731 602 240 268 222 318 288 313 451 492 439 392		130,958 113,276 111,270 114,698 119,104 137,844 160,869 177,271 190,171 202,965 200,182 196,421	
1974	January February March April May June July August September October November December AVERAGE	3,835 3,849 3,164 2,852 2,450 2,377 2,309 2,309 2,385 2,887 3,157 3,853 2,948	· .	2,880 2,399 2,226 2,522 2,704 2,783 2,792 2,705 2,552 2,700 2,801 2,924 2,668		464 306 287 220 268 220 221 125 152 237 454 515 289		181,179 149,125 128,822 125,553 141,806 160,645 182,458 198,673 208,269 209,908 212,875 223,717	
1975	January February March April May June July August September October November December AVERAGE	3,953 3,967 3,293 3,094 2,382 2,266 2,112 2,173 2,163 2,675 2,544 3,778 2,849		2,852 2,679 2,531 2,486 2,431 2,574 2,589 2,592 2,812 2,744 2,767 2,783 2,653		324 302 256 110 136 68 106 92 129 103 96 124		199,715 176,696 161,111 146,214 152,027 163,306 181,472 197,323 220,732 226,113 235,749 208,787	
1976	January February March April May	4,296	3,706 3,244 2,707 2,588 3,307	2,734	2,927 2,753 2,617 2,623 2,728	162	203 139 90 74	165,428	154,912 144,019 144,031 149,530
	(5 months)		-,		•				

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

^{*}See definitions.



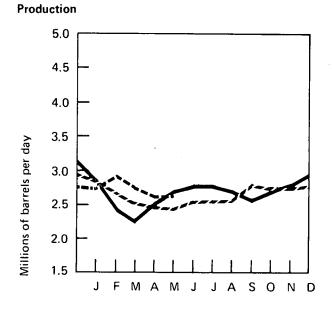
Μ

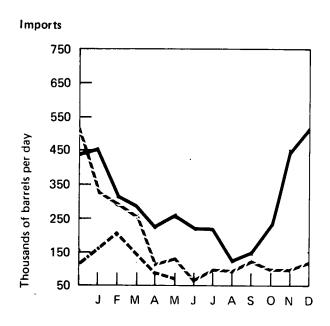
Μ

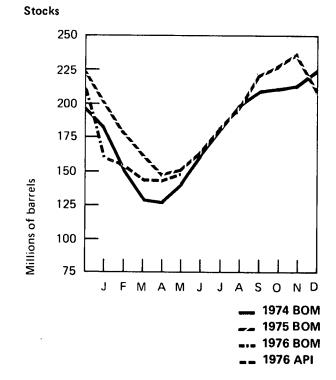
S 0 N D

2.0

1.5



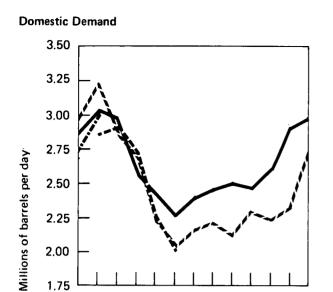




Residual Fuel Oil

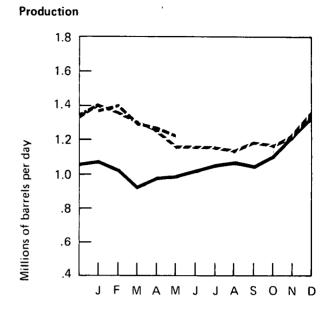
		Domestic Demand		Productio	n	Imports		Stocks	
				Thousands of	of barrels per	r day	•	Thousands of barrels	
		вом	API	вом	API	вом	API	вом	API
1973	January February March April May June July August September October November December AVERAGE	3,306 3,382 3,084 2,477 2,521 2,607 2,412 2,755 2,676 2,590 3,158 2,944 2,822		1,112 1,038 955 877 948 915 882 851 878 984 1,061 1,158		2,019 2,147 2,196 1,705 1,668 1,761 1,597 1,913 1,849 1,597 1,979 1,826 1,853		49,154 43,058 44,711 47,044 49,207 51,811 53,363 53,586 55,091 54,964 51,985 53,480	
1974	January February March April May June July August September October November December	3,035 2,991 2,556 2,437 2,260 2,405 2,473 2,529 2,475 2,611 2,935 2,983 2,639		1,072 1,029 912 985 995 1,026 1,056 1,067 1,032 1,099 1,229 1,335		1,733 1,904 1,713 1,593 1,362 1,500 - 1,474 1,520 1,421 1,465 1,753 1,630 1,587		46,548 45,004 47,222 51,339 54,356 57,891 59,787 60,988 60,251 58,679 60,363 74,939	
1975	January February March April May June July August September October November December	3,242 2,849 2,668 2,225 2,049 2,179 2,239 2,118 2,329 2,238 2,349 2,728 2,433		1,415 1,354 1,299 1,245 1,151 1,152 1,155 1,146 1,183 1,165 1,214 1,354		1,647. 1,402 1,292 1,047 1,123 904 1,144 982 1,312 1,221 1,169 1,099		60,233 66,495 64,148 66,340 73,498 69,660 71,526 71,857 76,938 81,858 83,131 74,126	
1976	January February March April May AVERAGE (5 months)	3,016	2,913 2,716 2,226 2,004 2,573	1,415	1,411 1,296 1,273 1,224 1,323	1,353	1,524 1,299 969 802 1,186	66,592	70,767 66,816 66,869 66,627

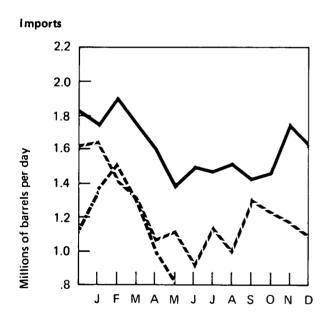
Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

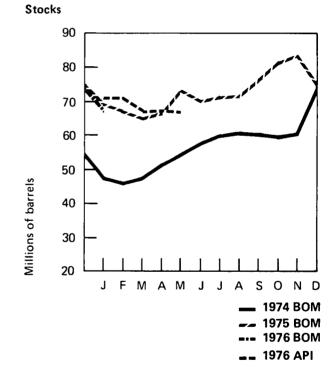


S O N

Α





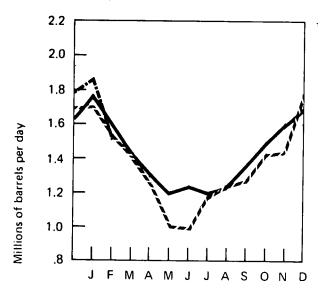


Natural Gas Liquids

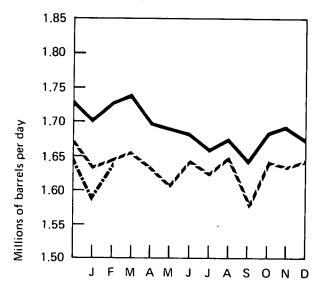
		Domestic Demand*	Product	ion*	Used at Refineries*	Imports	Stocks*
			At processing	At			
			plants	refineries			Thousands
			Thousands	of barrels per d	lay		of barrels
1973	January	1,994	1,680	361	839	312	68,792
	February	1,857	1,745	359	836	312	60,606
	March	1,407	1,734	378	790	260	63,873
	April	1,299	1,750	373	733	201	71,266
	May	1,270	1,739	421	733	217.	80,650
	June	1,149	1,727	388	757	163	89,433
	July	1,109	1,737	410	849	199	99,631
	August	1,281	1,748	390	858	240	105,068
	September	1,297	1,741	370	833	206	110,002
	October	1,499	1,756	377	835	249	109,639
	November	1,703	1,774	331	876	286	104,192
	December	1,607	1,729	338	842	232	98,940
	AVERAGE	1,454	1,738	375	815	239	
1974	January	1,778	1,699	327	794	304	91,210
1374	February	1,593	1,728	337	777	294	90,145
	March	1,408	1,741	341	720	224	94,817
	April	1,321	1,696	353	690	215	101,352
	May	1,180	1,690	340	678	182	110,881
	June	1,242	1,684	368	718	199	117,915
	July	1,187	1,657	364	723	163	125,427
	August	1,221	1,676	361	742	163	131,675
	September	1,360	1,638	348	738	166	133,215
	October	1,493	1,686	330	788	200	130,557
	November	1,604	1,694	301	795	208	124,447
	December	1,692	1,670	286	796	230	114,295
	AVERAGE	1,422	1,688	338	746	212	
1975	January	1,708	1,630	307	756	257	105,400
	February	1,512	1,646	296	734	181	100,945
	March	1,404	1,658	280	731	178	99,168
	April	1,242	1,635	273	667	176	100,408
	May	1,002	1,607	299	628	97	112,737
	June	998	1,646	323	659	166	125,215
	July	1,191	1,621	336	701	173	131,359
	August	1,227	1,650	357	690	163	137,074
	September	1,278	1,577	326	703	209	140,278
	October	1,429	1,643	310	729	198	138,981
	November	1,444	1,635	309	759	196	135,976
	December	1,787	1,646	310	768	232	124,278
	AVERAGE	1,352	1,633	311	710	186	
1976	January	1,885	1,585	305	728	240	109,450
	February	1,518	1,640	316	793	270	106,647
	AVERAGE (2 months)	1,707	1,612	310	760	254	

^{*}See Explanatory Note 4. Source: Bureau of Mines.

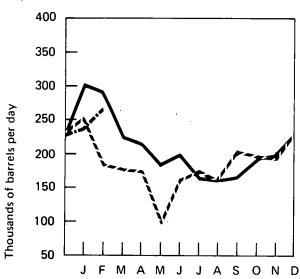
Domestic Demand



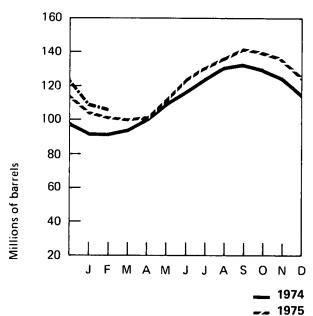
Production at Processing Plants







Stocks



U.S. Petroleum Supply and Demand-1976

	Actual	Forecast*			
	1st Qtr.	2nd Qtr.	3rd Qtr	4th Qtr.	
		Thousands of	Thousands of barrels per day		
Supply					
Crude oil and lease condensate production Natural gas plant liquids production Other hydrocarbon supply Crude oil imports Refined products imports** Total new supply Processing gain Stock change - all oils Total net supply	8,200 1,610 36 4,936 2,111 16,893 475 -701 18,069	8,122 1,592 36 5,224 1,412 16,386 467 +565 16,288	8,046 1,574 36 5,604 1,452 16,712 478 +524 16,666	7,972 1,592 36 5,543 2,051 17,194 473 -395 18,062	
Demand					
Crude oil and refined products exports Crude oil losses Domestic demand for refined products*** Total demand	210 14 17,866 18,090	206 13 16,069 16,288	198 13 16,455 16,666	195 13 17,854 18,062	
Unaccounted for crude oil†	-21	0	0	0	

^{*}See Explanatory Note 5 for discussion of basic assumptions of forecast.
**Includes plant condensate and unfinished oils.
***Includes international bunkers and plant condensate.

†Balancing item resulting from statistical inconsistencies.

Sources: 1st Quarter – API, BOM, FEA estimates. 2nd, 3rd, and 4th Quarters – FEA forecast.

Natural Gas

Marketed production of natural gas in May was projected to be 3.0 percent below the May 1975 volume. Production for the first 5 months of 1976 was estimated to be 3.2 percent below the amount produced during the same period of 1975.

Imports of natural gas in May were estimated to be 1.2 percent below the May 1975 level. During the first 5 months of the year, however, imports were expected to be 1.5 percent greater than the volume imported during the same months in 1975.

Domestic consumption in May was expected to drop 4.1 percent below the level reported for May 1975. During the period January through May, estimated consumption was 2.3 percent below the level for the same period of the previous year.

Net underground storage injections during May totaled 225 billion cubic feet, bringing the volume in storage reservoirs to 1,664 billion cubic feet at the end of the month.

Part 3

Natural Gas

Natural Gas

		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
			Billio	on cubic feet	
1973	January February March April May June July August September October November	2,348 2,126 2,015 1,835 1,729 1,534 1,558 1,582 1,527 1,708 1,905 2,182	1,994 1,821 1,952 1,864 1,898 1,839 1,880 1,896 1,840 1,875 1,863 1,926	1,069 963 1,052 1,007 1,026 963 999 994 956 1,001 1,000	93 84 91 88 86 79 80 85 82 91 85
	TOTAL	22,049	22,648	12,067	1,033
1974	January February March April May June July August September October November December	2,230 2,054 2,003 1,691 1,608 1,439 1,514 1,510 1,537 1,706 1,827 2,104	1,929 1,759 1,886 1,793 1,846 1,740 1,818 1,790 1,755 1,767 1,729 1,790	1,033 941 1,027 987 981 928 947 932 870 936 921 959	86 79 85 83 80 74 74 76 70 83 82 87
1975	January February March April May June July August September October November December	2,123 1,943 1,904 1,651 1,335 1,255 1,310 1,370 1,372 1,560 1,633 2,055	1,771 1,635 1,733 1,669 1,681 1,626 1,669 1,668 1,596 1,656 1,609 1,730	950 867 948 906 898 859 873 882 836 877 853 903	81 75 83 83 81 78 79 76 74 81 81 84
1976	TOTAL January February March April May TOTAL (5 months)	19,511 2,280 1,818 R1,802 1,570 1,280 8, 750	20,043 1,718 R1,622 R**1,658 R***1,590 ***1,630 8,218	894 850 894 NA NA NA 2,638 (3 months)	83 79 R85 ***82 ***80

^{*}See Explanatory Note 6.

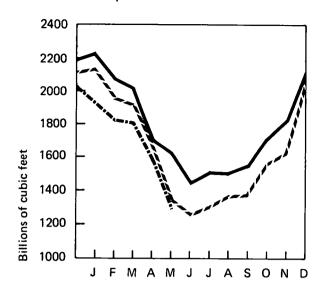
^{**}Preliminary data.
***Projected data.

R=Revised data. NA=Not available.

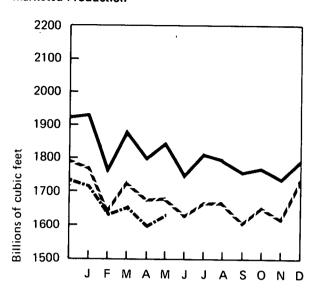
Note: All monthly Domestic Consumption data are estimated.

Sources: Consumption, Marketed Production, and Imports-Bureau of Mines; Domestic Producer Sales-Federal Power Commission.

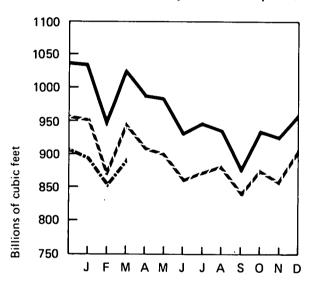
Domestic Consumption



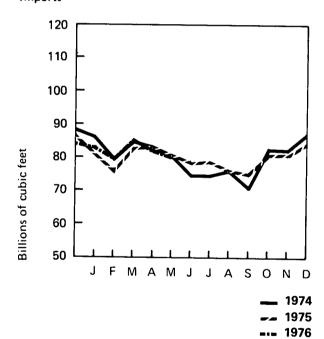
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports

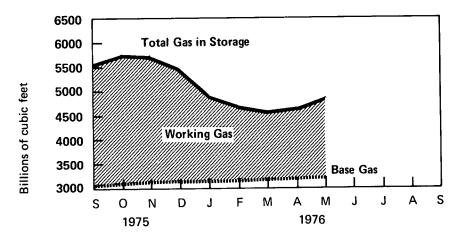


Natural Gas (Continued)

Natural Gas in Underground Storage*

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections
				Bill	ion cubic feet		
1974	October**	5,445	3,042	2,403	***	***	***
1975	September October November December	5,558 5,770 5,760 5,423	3,084 3,128 3,172 3,173	2,474 2,642 2,588 2,250	232 185 99 41	38 51 150 394	194 134 -51 -353
1976	January February March April May	4,868 4,660 4,543 4,650 4,878	3,194 3,197 3,195 3,208 3,214	1,674 1,463 1,348 1,443 1,664	19 73 85 181 248	630 292 217 68 23	-611 -219 -132 113 225

Gas in Storage



^{*}See Explanatory Note 7.

**Data reported as of November 1, 1974.

^{***}Between November 1, 1974, and August 31, 1975, a total of 1,658 billion cubic feet of gas was injected into storage and 1,686 billion cubic feet was withdrawn, for net storage injections of -28 billion cubic feet. Sources: Federal Energy Administration and Federal Power Commission.

Coal

Production of bituminous coal and lignite during May was 56.6 million tons, 2.2 percent greater than production in May 1975. This was somewhat below the 4.6-percent production increase reported for the first 4 months of the year.

Domestic consumption in February was down slightly (0.8 percent) from the February 1975 total. The electric utility sector used 4.6 percent more coal, but the other sectors used 13.3 percent less. (Utilities account for around 70 percent of total coal consumption.)

Coal exports increased to 5.8 million tons in April 1976 from a 1976 monthly average of 3.6 million tons. Exports for the period January through April were 19.6 percent below the amount exported during the same months of 1975.

Part 4



Bituminous and Lignite

		Domestic Consumption*	Production*	Exports	Stocks
			Thousands of	short tons	
1973	January February March April May June July August September October November	49,838 44,652 44,814 42,689 43,628 45,115 47,715 48,840 45,471 46,427 46,703	49,379 45,893 50,547 46,999 51,420 46,613 43,801 55,874 48,338 54,382 49,826	2,954 2,669 3,377 5,063 5,140 4,969 4,188 5,133 3,424 5,882 5,214	111,120 108,870 111,490 112,585 116,890 109,960 107,390 106,910 106,230 107,490
	December	50,130	48,666	4,889	103,022
	TOTAL**	556,022	591,738	52,903	
1974	January February March April	50,046 44,929 45,858 43,595	53,712 50,053 51,278 54,402 57,662	2,813 4,627 3,179 4,944 6,032	97,836 95,812 101,568 107,167 112,882
	May June July August September October November December	44,951 44,315 48,605 48,579 43,844 45,868 44,598 47,521	48,065 49,392 51,808 52,686 60,495 33,702 40,151	6,369 5,307 5,088 4,893 7,342 6,744 2,587	111,935 106,160 105,478 109,173 118,670 109,192 95,528
	TOTAL**	552,709	603,406	59,926	
1975	January February March April May June July August September October November	49,841 45,726 47,253 43,567 42,683 44,727 47,496 49,102 43,829 44,563 45,545 50,290	54,885 51,135 51,910 53,135 55,370 55,730 45,560 51,160 55,560 61,000 53,035 51,520	4,254 4,470 5,653 6,159 7,011 6,269 4,691 5,859 4,529 4,647 7,593 4,534	95,512 97,164 97,949 102,772 109,796 115,014 109,313 108,680 112,102 120,371 125,813 127,159
	TOTAL**	554,622	640,000	65,669	
1976	January February March April May	R52,484 R45,358 ***48,682 NA NA	51,495 50,005 R61,395 57,850 †56,605	3,697 3,050 3,979 5,780 NA 16,506	R119,408 R118,509 ***123,027 NA NA
	TOTAL**	146,524 (3 months)	(5 months)	(4 months)	

^{*}See Explanatory Note 8.

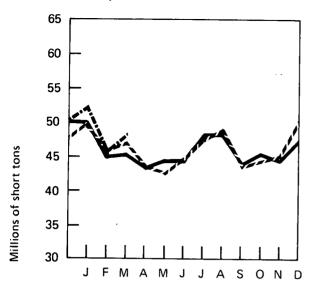
Source: Bureau of Mines.

^{***}Totals may not add due to rounding.
***FEA estimate based on data provided by BOM.

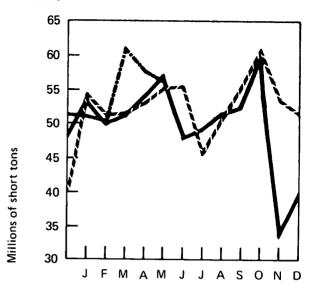
tPreliminary data.

R=Revised data. NA=Not available.

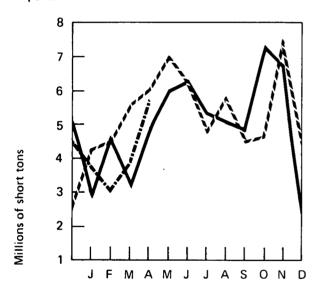
Domestic Consumption



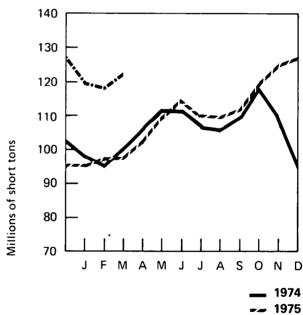
Production



Exports



Stocks



Anthracite

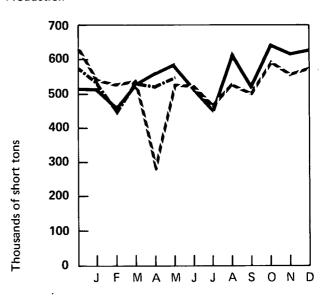
		Production	Domestic Consumption
		Thousands	of short tons
1973	January February March April	522 568 641 581	485 542 513 435
	May June July August September October	641 609 434 587 532 614	524 485 373 441 457 493
	November December TOTAL	582 519 6,830	464 459 5,671
1974	January February	516 458	466 441
	March April May	531 563 589 505	457 437 435 412
	June July August September	443 620 516	360 526 441
	October November December	641 610 625	522 463 488
	TOTAL	6,617	5,488
1975	January February March April	535 530 540 270	470 461 453 145
	May June July August	R530 525 460 530 495	R321 431 310 409 360
	September October November December	595 550 575	513 479 461
	TOTAL	R6,135	R4,813
1976	January February March April May	530 440 525 R520 555	493 390 *480 NA NA
	TOTAL	2,570 (5 months)	1,363 (3 months)

*Preliminary.

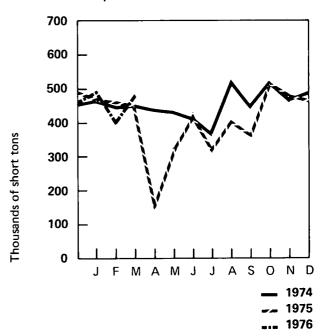
NA=Not available.

Sources: Production data are from Bureau of Mines; consumption data are FEA estimates based on figures provided by Bureau of Mines.

Production



Domestic Consumption



Electric Utilities

Preliminary data indicate that May 1976 production of electricity by utilities was 159.3 billion kilowatt hours, 5.4 percent above the level for May 1975. Average daily electricity production during the first 5 months of the year was 6.4 percent above the average for the same period in 1975.

During the period January through April 1976, electric utilities consumed 10.8 percent more coal, 5.7 percent more oil, and 4.0 percent more gas than during the corresponding months of 1975.

Coal stockpiles at powerplants increased from a 93-day supply at the end of March to a 100-day supply at the end of April; oil stockpiles increased from an 84- to a 91-day supply during the same period.

Cooling Degree-Days

Starting with the month of May and continuing through September, the *Monthly Energy Review* will publish cooling degreeday information for the continental United States. Cooling degree-days are the opposite of heating degree-days; they are a measure of the deviation of mean daily temperatures above 65°F.

During May, cool weather in most areas of the country resulted in the accumulation of 52.2 percent fewer cooling degree-days than last May and 36.7 percent fewer than the normal (1941-70 average) for the month.

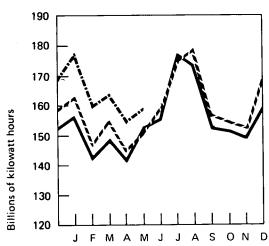
Part 5



Electric Utilities

		Total Net Produc	tion	P	ercentage Proc	duced from Each		
		Millions of kilowatt h		Oil	Gas	Nuclear	Hydro- electric	Other*
1973	January February	159,320 143,109	47.2 47.4	19.4 18.2	13.1 14.1	3.9 4.1	16.3 16.1	0.1 0.1
	March	147,754	45.7	16.2	16.2	4.5	17.3	0.1
	April	139,273	46.1	14.4	17.9	4.2	17.3	0.1
	May	147,021	44.3	14.7	20.2	3.9	16.8	0.1
	June	160,962	43.3	16.1	21.6	4.2	14.7	0.1
	July	173,461	43.9	16.5	22.6	4.0	12.9	0.1
	August	177,022	44.4	17.3	21.9	4.4	11.9	0.1
	September	156,294	45.7	17.3	21.1	4.9	10.9	0.1
	October	153,797	45.6	17.7	19.9	4.9	11.8	0.1
	November	147,823	47.2	17.6	16.1	5.5	13.5	0.1
	December	153,284	47.9	16.3	13.3	5.3	17.0	0.2
	TOTAL	1,859,120	AVERAGE 45.7	16.8	18.3	4.5	14.6	0.1
1974	January	156,906	47.0	16.6	13.3	4.8	18.2	0.1
1574	February	142,371	46.6	15.7	13.3	5.6	18.6	0.2
	March	149,933	45.3	14.6	15.8	5.8	18.4	0.1
	April	141,914	44.5	13.9	16.9	4.9	19.6	0.2
	May	153,439	44.3	14.7	18.4	4.2	18.2	0.2
	June	156,027	43.3	14.7	20.3	4.4	17.1	0.2
	July	177,798	42.9	15.6	20.9	5.6	14.8	0.2
	August	173,699	43.1	15.6	20.3	7.0	13.8	0.2
	September	152,084	42.9	16.4	19.3	7.1	14.1	0.2
	October	151,786	44.3	16.7	18.6	7.0	13.2	0.2
	November	149,581	44.9	18.4	15.2	7.2	14.1	0.2
	December	159,309	45.6	19.3	12.4	8.1	14.4	0.2
	TOTAL	1,864,847	AVERAGE 44.5	16.1	17.2	6.0	16.1	0.1
1975	January	163,498	45.8	18.7	12.1	8.1	15.2	0.1
1975	February	146,338	46.0	17,0	12.3	8.3	16.3	0.1
	March	154,932	44.6	15.0	13.0	9.2	18.1	0.1
	April	145,289	44.2	14.6	14.0	8.7	18.3	0.2
	May	151,168	42.5	13.9	16.9	8.2	18.3	0.2
	June	159,963	43.4	14.3	18.0	7.2	16.9	0.2
	July	175,856	43.1	14.2	19.4	8.6	14.5	0.2
	August	179,202	43.9	15.6	19.0	8.7	12.6	0.2
	September	156,802	44.8	13.7	19.1	9.1	13.1	0.2
	October	154,748	44.6	14.2	17.0	9.4	14.6	0.2
	November	152,334	46.0	14.2	14.3	9.3	16.0	0.2
	December	168,654	46.5	15.9	12.3	9.7	15.4	0.2
	TOTAL	1,908,784	AVERAGE 44.6	15.1	15.7	8.7	15.7	0.2
1976	January	177,873	47.0	18.1	11.1	8.9	14.7	0.2
1370	February	159,628	46.4	16.2	12.1	9.7	15.4	0.2
	March	164,152	46.6	15.5	12.9	8.6	16.2	0.2
		R154,020	46.6 47.2	15.0	14.1	R7.8	15.7	0.2
	April May	159,308	NA	NA	NA NA	7.5	NA	NA NA
	TOTAL (5 months)	814,981			Total Net	Production		
	,				400			

R=Revised data. NA=Not available. Sources: Federal Power Commission. Production data for latest month are from Edison Electric Institute.



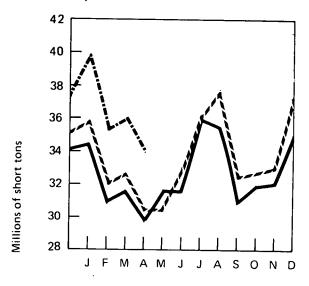
___ 1974 ___ 1975 ___ 1976

^{*}Includes electricity produced from geothermal power, wood, and waste.

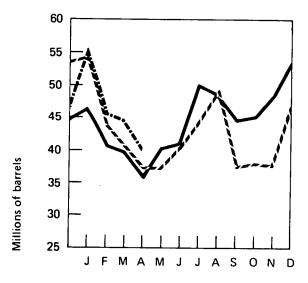
Fuel Consumption

		Coal	Oil	Gas
		Thousands of short tons	Thousands of barrels	Millions of cubic feet
1973	January	34,591	55,773	219,270
	February	30,921	46,978	212,983
	March	30,746	42,701	255,314
	April	29,209	35,845	267,151
	May	29,683	38,097	316,989
	June	31,951	46,421	371,221
	July	34,863	51,352	422,396
	August	36,093	55,356	419,507
	September	32,814	48,103	353,040
	October	32,470	48.188	328,630
	November	32,154	46,420	252,341
	December	34,141	44,850	216,988
	TOTAL	389,636	560,084	3,635,830
		•	·	
1974	January	34,599	46,745	219,338
	February	30,857	40,687	201,587
	March	31,638	39,645	254,175
	April	29,679	35,959	259,313
	May	31,700	40,831	306,945
	June	31,719	41,227	346,584
	Ju!y	36,111	50,119	403,391
	August	35,555	48,970	380,585
	September	30,989	44,550	313,079
	October	32,127	45,268	298,109
	November	32,211	48,525	238,908
	December	35,176	53,648	207,095
	TOTAL	392,361	536,174	3,429,109
1975	January	35,853	54,169	204,931
	February	32,104	43,670	188,684
	March	32,783	40,399	210,283
	April	30,452	37,099	213,580
	May	30,410	37,015	271,790
	June	33,058	40,791	306,147
	July	36,367	44,329	359,160
	August	37,839	49,262	359,117
	September	32,488	37,207	315,165
	October	32,811	38,099	274,122
	November	33,185	37,604	227,070
	December	37,324	46,727	213,246
	TOTAL	404,674	506,371	3,143,295
1976	January	39,887	56,076	204,410
	February	35,364	45,109	200,369
	March	36,082	44,172	220,482
	April	34,015	40,008	224,611
	TOTAL (4 months)	145,348	185,365	849,872

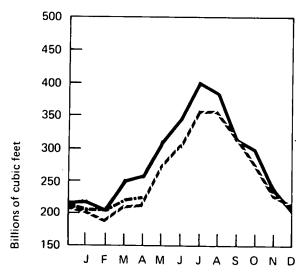
Coal Consumption



Oil Consumption



Gas Consumption



— 1974 **—** 1975

on. **_..** 1976

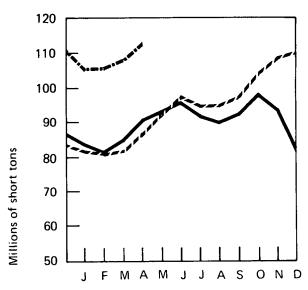
Source: Federal Power Commission.

Electric Utilities (Continued)

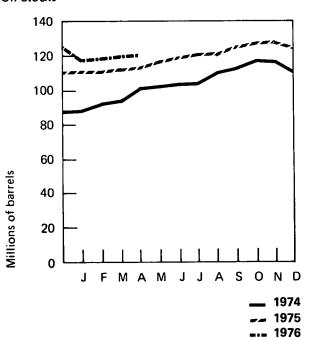
Stocks at End of Month

	Stocks at End of Month		
	Coal	Oil	
	Thousands of short tons	Thousands of barrels	
January February March April May June July August September October November December	95,017 92,993 93,986 94,991 98,722 97,995 92,215 91,356 90,156 91,428 90,369 86,880	53,691 50,858 54,885 62,411 64,259 65,003 67,987 73,259 74,863 76,343 81,224 88,228	
January February March April May June July August September October November December	83,366 80,962 84,257 90,901 93,628 95,811 91,616 89,691 92,704 98,373 93,825 83,652	89,053 92,645 94,187 100,210 103,606 104,316 105,919 110,997 113,570 117,564 116,558 111,990	
January February March April May June July August September October November December January February March April	81,429 81,065 81,872 86,656 93,027 97,834 94,067 94,107 97,790 104,776 109,065 110,688 105,301 105,609 108,435 113,029	110,304 111,581 113,377 113,930 116,940 119,653 121,076 120,601 126,137 128,338 129,629 125,028 117,575 118,509 120,348 121,957	
	February March April May June July August September October November December January February March April May June July August September October November December January February March April May June July August September October November December January February March April May June July August September October November December January February March July August September October November December January February March	Thousands of short tons January 95,017 February 92,993 March 93,986 April 94,991 May 98,722 June 97,995 July 92,215 August 91,356 September 90,156 October 91,428 November 90,369 December 86,880 January 83,366 February 80,962 March 84,257 April 90,901 May 93,628 June 95,811 July 91,616 August 89,691 September 92,704 October 98,373 November 93,825 December 83,652 January 81,429 February 81,065 May 93,027 June 97,834 July 94,067 August 94,107 September 97,790 October 104,776 November 109,065 December 110,688 January 105,301 February 105,609 March 108,435	

Coal Stocks



Oil Stocks

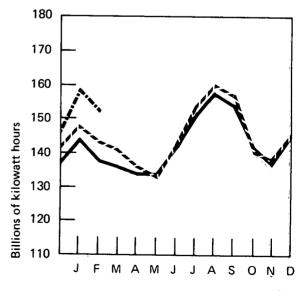


Source: Federal Power Commission.

_	
\ 2	Dα

		Residential	Commercial	Industrial	Other*	Total
			Millions of kilov	vatt hours		
1973	January February March April May June July August September October November December	52,840 49,601 46,315 41,821 39,825 44,967 54,123 56,742 56,210 47,207 43,175 46,442 579,268	31,182 30,445 30,100 29,038 30,060 33,194 36,147 36,820 36,711 33,289 31,363 29,788 388,137	55,274 54,591 55,866 55,937 56,838 57,368 57,152 58,865 59,178 60,514 58,464 56,190 686,237	5,209 4,909 4,822 4,571 4,638 4,764 5,140 5,054 5,211 5,032 5,085 4,896 59,331	144,505 139,546 137,103 131,361 131,361 140,293 152,562 157,431 157,310 146,042 138,087 137,316
1974	January February March April May June July August September October November December	52,846 47,832 46,154 43,294 41,215 46,596 53,435 56,558 53,252 44,177 42,773 50,368 578,500	30,608 29,542 29,309 28,986 29,876 32,800 35,229 36,414 35,830 32,112 30,968 31,757 383,431	55,754 54,978 55,999 56,497 57,386 58,077 57,899 59,803 60,366 60,053 57,361 53,878 688,051	4,995 4,708 4,693 4,610 4,685 4,641 4,965 5,069 4,983 4,792 4,969 4,974 58,084	144,203 137,060 136,155 133,387 133,162 142,114 151,528 157,844 154,431 141,134 136,071 140,977
1975	January February March April May June July August September October November December	55,547 52,185 49,974 46,883 43,226 48,461 56,829 59,979 56,983 45,142 44,019 51,900 611,128	33,026 32,441 32,005 31,335 31,608 35,266 37,891 38,768 37,550 33,329 32,288 33,183	54,280 53,142 53,182 52,526 53,364 54,104 53,973 56,067 56,797 56,486 56,174 55,532	5,245 4,984 4,914 4,737 4,745 4,777 5,052 5,223 5,320 5,194 5,235 5,357 60,783	148,098 142,752 140,075 135,481 132,943 142,608 153,745 160,037 156,650 140,151 137,716 145,972
1976	January February	60,091 54,264	34,833 33,583	57,448 58,228	6,380 5,874	158,752 151,949
	TOTAL (2 months)	114,355	68,416	115,676	12,254	310,701

Total Sales



-- 1974 -- 1975 -- 1976

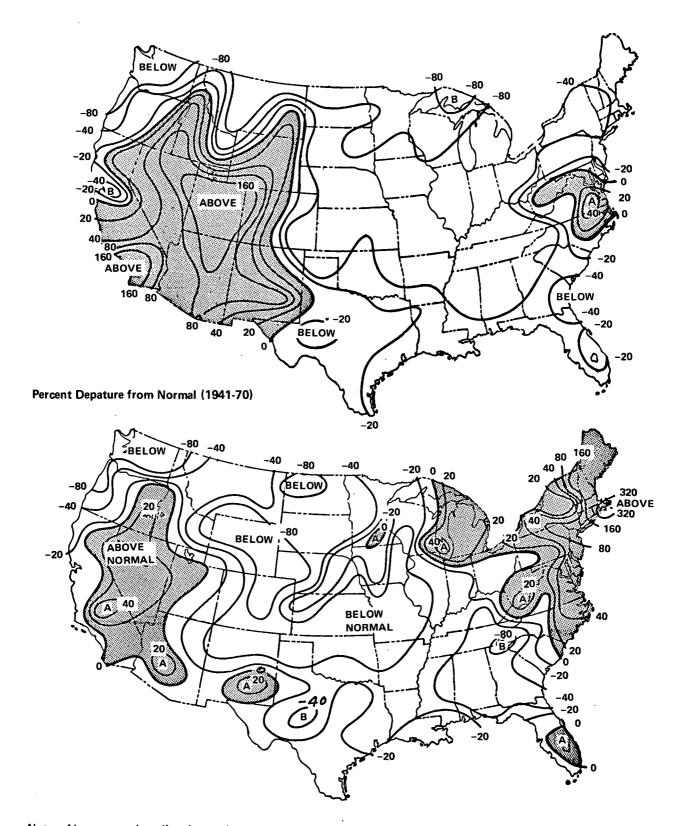
^{*}Includes street lighting and trolley cars. Source: Federal Power Commission.

Cooling Degree-Days

Petroleum Administration for Defense (PAD) Districts	1976	MAY (May 3 1975**	- May 30) Normal (1941-70)**
PAD District I New England Conn., Maine, Mass., N.H., R.I., Vt.	66.8 16.9	130.9 (-49.0) 53.7 (-68.5)	89.5 (-25.3) 14.2 (19.4)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	25.9	83.2 (-68.8)	42.9 (-39.6)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W. Va.	150.2	236.4 (-36.5)	192.5 (-22.0)
PAD District II III., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.	19.8	97.9 (-79.7)	61.7 (-67.9)
PAD District III Ala., Ark., La., Miss., N. Mex., Tex.	130.4	250.1 (-47.9)	233.5 (-44.1)
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	13,8	5.7 (141.2)	13.1 (5.3)
PAD District V Ariz., Calif., Nev., Oreg., Wash.	62.7	50.0 (25.6)	52.5 (19.4)
U.S. TOTAL	57.2	119.7 (~52.2)	90.4 (-36.7)

^{*}See Explanatory Note 9 for explanation of cooling degree-days.
**Percentage change in parentheses.

Percent Departure from 1975



Note: Above normal cooling degree-days correspond to above normal temperatures. Source: Department of Commerce—NOAA.

Part 6

The 53 domestic reactors in commercial operation, with a maximum capacity of 34,777 megawatts, performed at 45 percent of capacity in May, up slightly from 42 percent in April. As reported last month, scheduled plant shutdowns for refueling, which began in March and April, continued during May. Fourteen reactors were idle for significant time periods during the month. Annual refueling is commonly undertaken in springtime, so that the reactors may be ready for the high electricity demand in the summer.

In May, the Arizona Public Service Company was issued a permit to construct a three-reactor plant at Palo Verde in Maricopa County, Arizona. Each is a pressurized water reactor rated at 1,237 megawatts, and they are scheduled for operation in 1982, 1984, and 1986. The Palo Verde plant will represent the world's largest single nuclear generating station and will provide electricity for Arizona, Nevada, and California.

The Energy Research and Development: Administration reported in their annual uranium market survey that domestic yellowcake purchases in 1975 totaled 14,500 tons, compared with 15,700 tons in 1974. Purchases of foreign uranium by U.S. firms totaled 4,400 tons versus 33,000 tons in 1974. This large decline in imports is primarily the result of uranium export curtailment policies in Australia and Canada. The survey also revealed that over 80 percent of U.S. domestic uranium requirements for the years 1982 through 1985 remained unsupplied.

Nuclear Power

U.S. Nuclear Powerplant Operations*

		Maximum Dependable Capacity	Average Power	Percer Total Dome Electr Gener	stic icity
		Thousands of	net kilowat	ts	
1973	January February March April May June July August September October November December	14,444 14,444 15,682 16,103 16,976 18,677 18,677 20,199 21,250 21,250 22,121 23,676 18,649	8,395 8,821 8,991 8,161 7,657 9,429 9,355 10,463 10,815 10,036 11,308 10,543 9,513	3.9 4.1 4.5 4.2 3.9 4.2 4.0 4.4 4.9 5.5 5.3	
1974	January February March April May June July August September October November December AVERAGE	24,006 24,776 25,305 26,862 27,670 28,748 31,374 33,045 32,609 34,464 34,480 35,317 29,921	10,194 11,992 11,715 9,826 8,791 9,740 13,577 16,442 15,159 14,409 14,528 17,375 12,865	4.8 5.6 5.8 4.9 4.2 4.4 5.6 7.0 7.1 7.1 7.2 8.1 6.0	
1975	January February March April May June July August September October November December	35,691 35,899 35,686 35,017 35,017 35,322 35,596 35,589 35,540 36,752 36,424 35,671	17,843 18,063 19,091 17,516 16,613 16,097 20,297 20,618 19,892 19,464 19,586 21,985 18,926	8.1 8.3 9.2 8.7 8.2 7.2 8.6 8.7 9.1 9.4 9.3 9.7	
1976	January February March April May AVERAGE (5 months)	36,750 36,879 38,072 39,763 **38,787 38,054	21,315 22,213 18,935 R16,604 **16,086 19,005	8.9 9.7 8.6 R7.8 **7.5 8.5	U.S. Nuclear Powerplants 40 35 30 Capacity 51 Capacity Monthly Average Power 5
				1975 1976	J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D 1976

^{*}Includes all units licensed to operate, whether in commercial operation or power ascension status.

R=Revised data.

Note: Capacity data for 1973 through 1976 have been revised to include the Hanford-N reactor, operated by the Energy Research and Development Administration.

Sources: Average Power for latest month and Capacity are from U.S. Nuclear Regulatory Commission; Percent of Total Domestic Electricity Generation for latest month is based on data from Edison Electric Institute; remaining data are from Federal Power Commission.

^{**}Preliminary data.

Status of Nuclear Powerplants - May 31,1976

Status	•	N	umber of Plants			Design Capacity
	Boiling Water Reactors	High- Temperature Gas Reactors	Pressurized Water Reactors	Other*	Total	Net Electrical Megawatts
Licensed to operate	23	1	34	0	58	40,000
Construction permit granted	21	0	53	0	74	77,000
Construction permit pending	22	0	39	5	66	73,000
Orders placed for plant	3	0	14	0	17	20,000
Publicly announced	_	_	_	21	21	26,000
TOTAL	69	1	140	26	236	236,000

^{*}Includes 1 Liquid Metal Fast Breeder Reactor and 25 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment - May 1976

	Domestic Customers	Foreign Customers	Total
Separative Work Performed (in metric tons of separative work units)	221,419	345.732	567,151
Cost (in millions of dollars)	13.495	20,437	33.932
Product Quantity (in metric tons of uranium)	57.556	93.204	150,760
Average Enrichment (in percent U-235)	2.780	2.693	2,726
Feed Requirement (in metric tons of uranium)	290.567	454.714	745.281

Source: U.S. Energy Research and Development Administration.

Nuclear Power Generation by Major Non-Communist Countries - May 1976

	Number of	Generation of Electricity							
Country	Reactors*	Capacity	Generation	Percent o	of Design C	apacity			
			May	May	Y	ear			
					1974	1975			
		Thousands of gross electrical kilowatts	Millions of gross kilowatt hours						
Canada	5	2,380	1,498	85	74	64			
Federal Republic of Germany	8	4,750	1,155	33	57	72			
France	10	3,070	1,728	76	57	68			
Great Britain	29	6,140	**2,530	**55	61	57			
India	3	620	378	82	55	46			
Italy	3	620	214	46	61	69			
Japan	12	6,600	3,263	66	61	36			
Spain	3	1,120	401	48	75	77			
Sweden	5	3,310	1,494	61	20	44			
Switzerland	3	1,050	635	81	76	84			
United States .	56	41,240	12,656	41	57	60			
TOTAL	137	70,900	25,952	49	58	58			

^{*}Includes only operational units, i.e., those which have generated electricity during, or prior to, the current month.
**Figures are for 4-week operating period.

Source: Nucleonics Week.

Summary of Monthly Nuclear Fuel Cycle - April 1976

Fuel Cycle Activity	Product	Processed Material*	Percent Utilization of Industry Capacity	Energy Content of Processed Material**	Energy Consumed in Fuel Cycle Activity***	Cost Contribution to Electric Powert
		MTU except where noted		Billi	on Btu	Mills per kilowatt hour
Milling	Yellowcake (U ₃ O ₈) Deliveries	851	76.6	293,000	480	1.04
Conversion	Uranium Hexa- fluoride (UF ₆) Deliveries	695	48.3	240,000	150	0.07
Enrichment	Enriched UF ₆ Deliveries	151 (567 MT-SWU)	††	378,000	4,400	0.86
Fabrication	Finished Fuel Assemblies Shipped	93	38.8	233,000	144	0.46
Powerplant Operation	Electricity Generated	11,575 (million kWhe)	41	123,000	534 (million kWhe)	9.82
	Spent Fuel Discharged	NA	-	_	-	
Reprocessing	Spent Fuel Received	6	-	_	- }	†††0.97
	Spent Fuel Reprocessed	0		_	-)	

^{*}Units of measure are discussed in Explanatory Notes 10 and 11.

Source: ERDA.

^{**}Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6.1 feed to product ratio at the enrichment plant.
**Energy requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.

theory requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.

†Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWh reactor operating at 80 percent capacity factor, given in U.S.A.E.C. Report No. WASH 1174-74. Because of the long lead time required for nuclear fuel processing, the sum of numbers in this column does not necessarily reflect the fuel cost of current electricity

tterda's enrichment plans are presently operating at maximum utilization of available electric power, with the excess production being placed in the "preproduction stockpile" in anticipation of high demand for enriched uranium in the 1980's. tttrigure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste deposition.

NA=Not available.

Part 7

Energy Consumption

Domestic energy consumption in April 1976 totaled 5.805 quadrillion Btu, an increase of less than 1 percent over the consumption level for the same month in both 1975 and 1974. No sectoral breakdown is available for April as yet.

The revised consumption figure for March was 6.337 quadrillion Btu. Of the total, 2.482 quadrillion Btu was consumed by the residential and commercial sector, which was down 4.5 percent compared with March 1975 consumption, but up 3.0 percent from the March 1974 level. Direct consumption of primary fuels amounted to 59.1 percent of this sector's total consumption (coal was 0.6 percent, dry natural gas was 34.6 percent, and petroleum products were 23.9 percent). Consumption of electricity accounted for the remaining 40.9 percent.

The industrial sector consumed 2.269 quadrillion Btu in March, up 5.1 percent from the March 1975 level but down 3.6 percent from consumption in March 1974. Coal accounted for 14.5 percent of the total, 31.0 percent was dry natural gas, 23.9 percent was petroleum products, and 30.4 percent was electricity.

Consumption in the transportation sector in March amounted to 1.627 quadrillion Btu, which was 5.9 percent greater than consumption in March 1975 and 8.6 percent greater than in March 1974. Petroleum products comprised 95.3 percent of the energy consumed by this sector. Natural gas used for pipeline transportation and electricity used by railroads and for street and highway lighting accounted for the balance,

Petroleum Consumption and Forecast

Total domestic demand for petroleum products during May 1976 was 16,121 thousand barrels per day. This was 2.9 percent greater than the forecast level and 6.6 percent greater than demand during last May.

Domestic demand for motor gasoline in May was 7,112 thousand barrels per day, which was 3.0 percent above the forecast level and 3.5 percent above the level for May 1975.

Domestic demand for distillate fuel oil was 2,588 thousand barrels per day in May. This was 3.8 percent over the forecast level and 8.6 percent above actual demand during May 1975.

Domestic demand for residual fuel oil during May was 2,004 thousand barrels per day, which was 7.5 percent below the forecast level and 2.2 percent below demand during May 1975.

Energy Conservation Indicators

In this issue two energy conservation indicators are featured: (1) Gasoline Consumption per Licensed Driver* and (2) Average Heat Rate for Fossil Fuel Electric Plants.** The indicators are shown for the period 1964-1975. Updates of these and other conservation indicators will be included in subsequent issues as they become available.

Gasoline Consumption per Licensed Driver

Gasoline consumption per licensed driver increased steadily at an average rate of 2.4 percent per year from 1964 through 1973. In 1974, this indicator fell 6.8 percent and then dropped another one-half percent in 1975.

Average Heat Rate for Fossil Fuel Electric Plants

After remaining fairly constant from 1964 through 1968, the average heat rate of electric utilities rose a total of 1.6 percent during the period 1969 through 1971. Since 1971, however, the indicator has shown a slight decline of 1.0 percent through 1975.

Consumption

^{*}See Explanatory Note 13.

^{**}See Explanatory Note 14.

Sector ¹			Primary Energy	Source		Primary Energy Consumption	Electricity Distributed ⁷	Net Energy Consumption	Electrical Energy Loss Distributed ⁸	Ultimate Energy Disposition	9
	Coal ²	Natural Gas (dry) ³	Petroleum⁴	Hydroelectric ⁵	Nuclear ⁶						
Residential and Commercial	0.014	0.858	0.594	_	_	1.466	0.297	1.763	0.718	2.482	
Industrial	0.330	0.704	0.542	0.003	_	1.579	0.202	1.781	0.487	2.269	•
Transportation	0.001	0.057	1.551	_	(°)	1.609	0.005	1.614	0.013	1.627	
Electric Utilities	0.790	0.226	0.270	0.286	0.150	1.723	_		-	_	
TÖTAL	1,135	1.845	2,957	0.289	0.150	6.377	0.504	5.159	1.219	6.377	

¹See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

² Data are from the Bureau of Mines. Includes anthracite and bituminous coal and lignite.

³ Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. Data from the American Gas Association are used for the Residential and Commercial Sector, adjusted to include a portion of the AGA "Other" category. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.5 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

⁴ Aggregate petroleum data are from the Bureau of Mines. FPC provided data on oil consumed by electric utilities.

Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline - 100 percent; naphtha jet fuel - 100 percent; kerosine jet fuel - 97 percent; distillate fuel oil - 30.3 percent; residual fuel oil - 11.2 percent; all other products - 4.7 percent. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974 Bureau of Mines data on consumption: Residential and Commercial - 52.3 percent; Industrial - 47.7 percent.

⁵ FPC hydroelectric power production plus net imports of electricity from Canada. These imports, estimated at 0.011 quadrillion Btu per month, were assumed to be from hydroelectric power sources. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines annual figure for 1975.

⁶ FPC nuclear power production.

⁷ Electricity was distributed using Edison Electric Institute data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation Sector. All "other" sales, largely for use in government buildings, were distributed to the Residential and Commercial Sector.

In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

9 Negligible.

Percent Changes in Energy Consumption for March 1976 by Sources and Economic Sectors

	March 1976 Consumption	Percent Change from March 1975	Cumulative Percent Change from 1975 (January through March)*
	Quadrillion Btu		
Refined Petroleum Products	2.963	+6.2	+4.1
Motor Gasoline Jet Fuel Distillate Residual Other Petroleum Products	1.108 0.186 0.586 0.529 0.555	+7.6 +8.8 -1.5 +1.8 +14.5	+5.8 -1.8 +0.5 -1.4 +11.8
Natural Gas (Dry)	1.845	-5.4	-1.1
Coal (Anthracite, bituminous, and lignite)	1.135	+3.1	+1.9
Electricity (Sales)	0.504	+5.5	+5.2
TOTAL ENERGY USE	6.377	+1.3	+1.6
Economic Sector Consumption	•		
Residential and Commercial Industrial Transportation	2.482 2.269 1.627	-4.5 +5.1 +6.0	+1.0 +1.0 +3.6

^{*}Calculated on daily average basis.

Energy Consumption (Continued)

Energy Consumption by the Residential and Commercial Economic Sector

g, -			Natural Gas		Electricity	Electrical Energy Loss	Total Energy	Cumulative Total Energy
		Coal	(dry)	Petroleum ²	Distributed	Distributed	Use	Use
				Quadrillion	(10 ¹⁵) Btu			
1973	January February March	0.038 0.032 0.025	1.257 1.113 0.925	0.707 0.653 0.620	0.299 0.285 0.272	0.716 0.610 0.629	3.017 2.693 2.471	3.017 5.710 8.181
	April May June July	0.016 0.017 0.017 0.017	0.745 0.539 0.354 0.279	0.527 0.562 0.511 0.503	0.253 0.250 0.279 0.321	0.569 0.612 0.714 0.814	2.109 1.980 1.873 1.934	10.290 12.270 14.143 16.077
	August September October November	0.018 0.024 0.028 0.031	0.253 0.276 0.344 0.610	0.560 0.538 0.592 0.658 0.648	0.332 0.330 0.287 0.266 0.271	0.835 0.690 0.651 0.615 0.665	1.997 1.859 1.902 2.180 2.500	18.074 19.933 21.835 24.015 26.515
	December TOTAL	0.033 0.295	0.882 7.577	7.077	3.445	8.120	26.515	
1974	January	0.040 0.034	1.158 1.027	0.662 0.590	0,296 0,275	0.696 0.599	2.851 2.525	2.851 5.376
	February March April	0.027 0.019 0.016	0.902 0.754 0.499	0.569 0.530 0.497	0.268 0.258 0.254	0.642 0.595 0.654	2.409 2.155 1.920	7.785 9.940 11.859
	May June July	0.015 0.014	0.357 0,293	0.503 0.507 0.519	0.282 0.315 0.330	0.684 0.843 0.807	1.841 1.972 1.941	13,701 15.672 17.613
	August September October	0.021 0.025 0.027	0.265 0.278 0.395	0.513 0.589	0.316 0.271	0.651 0.636	1.784 1.919 2.078	19.397 21.316 23.394
	November December TOTAL	0.027 0.031 0.297	0.569 0.930 7.427	0.583 0.628 6.688	0.263 0.292 3.420	0.636 0.736 8.178	2.617 26.010	26.010
	TOTAL	0.237	7.427	0.000				
1975	January February March April	0.035 0.024 0.024 0.011	1.124 1.105 1.018 0.905	0.648 0.553 0.566 0.506	0.315 0.300 0.291 0.278	0.764 0.652 0.700 0.639	2.886 2.634 2.599 2.339	2.886 5.521 8.119 10.459
	May June July	R0.012 0.014 0.017	0.522 0.332 0.293	0.457 0.452 0.482	0.267 0.297 0.336 0.350	0.671 0.746 0.864 0.878	R1.928 1.842 1.990 1.966	R12.387 R14.229 R16.219 R18.186
	August September October November	0.014 0.015 0.015 0.015	0.264 0.281 0.353 0.523	0.461 0.501 0.555 0.517	0.336 0.280 0.273	0.684 0.677 0.659	1.825 1.880 1.987	R20.011 R21.891 R23.877
	December TOTAL	0.014 R0.210	0.910 7.629	0.643 6.340	0.303 3.625	0.778 8.722	2.648 R26.526	R26.526
1976	January February March	0.014 R0.010 0.014	1.229 1.106 0.858	0.675 0.595 0.594	0.340 R0.314 0.297	0.841 R0.684 0.719	3.099 R2.709 2.482	3.099 R5.808 8.290
	TOTAL	0.038	3.193	1.865	0.951	2.243	8.290	

Energy Consumption by the Industrial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ³	Hydroelectric	Electricity Distributed	Electrical Energy Loss	Total Energy	Cumulative Total Energy
		Coal	(diy)	retroleum	•	on (10 ^{1 5}) Btu	Distributed	Use	Use
1973	January	0.393	0.832	0.640	0.003	0.189	0.450	2.500	2.500
	February	0.362	0.764	0.591	0.003	0.186	0.452 0.399	2.508 2.305	2.508
	March	0.369	0.802	0.561	0.003	0.100	0.399		4.813
	April	0.363	0.794	0.477	0.003	0.191		2.366	7.179
	May	0.369	0.846	0.508	0.003	0.191	0.430 0.475	2.257	9.436
	June	0.351	0.787	0.462	0.003	0.194	0.475	2.395	11.831
	July	0.345	0.836	0.455	0.003	0.195	0.502	2.301	14.132
	August	0.340	0.888	0.506	0.003	0.193	0.505	2.328 2.444	16.459
	September	0.329	0.876	0.487	0.003	0.202	0.422	2.444	18.903
	October	0.363	1.010	0.535	0.003	0.202	0.422	2.320 2.587	21.223
	November	0.374	1.012	0.595	0.003	0.199	0.460	2.644	23.809
	December	0.412	1.046	0.586	0.003	0.192	0.470	2.708	26.453 29.161
	TOTAL	4.370	10.493	6.403	0.036	2.341	5.518	29.161	25.101
1974	January	0.378	0.830	0.603	0.003	0.190	0.447	2.451	2.451
	February	0.354	0.804	0.538	0.003	0.188	0.409	2.295	4.746
	March	0.358	0.827	0.519	0.003	0.191	0.457	2.355	7.101
	April	0.352	0.662	0.483	0.003	0.193	0.445	2.139	9.240
	May	0.342	0.788	0.453	0.003	0.196	0.504	2.286	11.526
	June	0.326	0.724	0.458	0.003	0.198	0.480	2.189	13.715
	July	0.325	0.806	0.462	0.003	0.198	0.529	2.323	16.037
	August	0.335	0.853	0.473	0.003	0.204	0.499	2.368	18.405
	September	0.325	0.933	0.468	0.003	0.206	0.424	2.359	20.764
	October	0.347	0.997	0.537	0.003	0.205	0.480	2.569	23.333
	November	0.312	1.001	0.532	0.003	0.196	0.473	2.516	25.849
	December	0.309	0.945	0.573	0.003	0.184	0.464	2.478	28.327
	TOTAL	4.063	10.170	6.100	0.036	2.348	5.611	28.327	
1975	1			0.504	0.000				
1975	January	0.344	0.773	0.591	0.003	0.185	0.450	2.346	2.346
	February March	0.344	0.630	0.505	0.003	0.181	0.394	2.057	4.403
	April	0.365	0.657	0.516	0.003	0.181	0.436	2.158	6.562
	May	0.341	0.515	0.461	0.003	0.179	0.412	1.912	8.473
	June	0.321 0.299	0.529	0.417	0.003	0.182	0.458	1.910	10.383
	July	0.299	0.605	0.412	0.003 0.003	0.185	0.463	1.967	12.350
	August	0.294	0.646	0.439	0.003	0.184	0.474	2.034	14.384
	September	0.294	0.734	0.420		0.191	0.480	2.123	16.507
	October	0.294	0.763 0.917	0.457 0.507	0.003 0.003	0.194	0.400	2.111	18.618
	November	0.307	0.865	0.507		0.193	0.465	2.392	21.010
	December	0.318	0.909		0.003	0.192	0.463	2.314	23.324
				0.586	0.003	0.189	0.487	2.513	25.837
	TOTAL	3.855	8.544	5.782	0.036	2.237	5.383	25.837	
1976	January	0.330	0.822	0.616	0.003	0.196	0.405	0.450	0.455
	February	R0.312	0.492	0.543	0.003	R0.199	0.485 B0.433	2.452	2.452
	March	0.330	0.704	0.542	0.003	0.202	R0.432 0.487	R1,981 2,269	R4,433 6,701
	TOTAL	0.972	2.018	1.701					0.701
	·JIAL	0.312	2.010	1.701	0.009	0.596	1.405	6.701	

Energy Consumption (Continued)

Energy Consumption by the Transportation Economic Sector

		Coal	Natural Gas (dry) ⁴	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
		•••	,	Quadrillion (1	0 ^{1 5}) Btu			
1973	January February March April May June July August September October November December	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.085 0.076 0.070 0.062 0.056 0.046 0.045 0.047 0.055 0.066	1.511 1.417 1.502 1.412 1.540 1.471 1.528 1.588 1.437 1.520 1.523 1.491	0.005 0.005 0.005 0.005 0.004 0.004 0.004 0.005 0.005 0.005 0.005	0.013 0.011 0.012 0.010 0.011 0.011 0.011 0.011 0.010 0.011 0.012 0.013	1.615 1.510 1.589 1.490 1.612 1.533 1.589 1.651 1.499 1.592 1.607 1.589	1.615 3.125 4.714 6.204 7.816 9.350 10.939 12.590 14.089 15.681 17.288 18.877
	TOTAL	0.009	0.733	17.940	0.058	0.137	10.077	
1974	January February March April May June July August	0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.072 0.066 0.063 0.051 0.047 0.039 0.040 0.041	1.399 1.300 1.417 1.397 1.484 1.448 1.514 1.533	0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.013 0.011 0.012 0.011 0.012 0.011 0.012 0.012	1.490 1.384 1.498 1.465 1.547 1.503 1.571 1.590	1.490 2.874 4.371 5.836 7.384 8.887 10.458 12.048
	September October November December	0.001 0.001 0.001 0.001 0.009	0.044 0.051 0.057 0.068 0.638	1.393 1.507 1.455 1.546 17.392	0.005 0.005 0.005 0.006 0.060	0.010 0.012 0.013 0.014 0.143	1.453 1.576 1.532 1.634 18.242	13.501 15.077 16.608 18.242
1975	January February March April May June July August September October November December	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.069 0.063 0.061 0.052 0.038 0.034 0.034 0.036 0.038 0.046 0.050 0.066	1.498 1.334 1.456 1.455 1.480 1.466 1.498 1.509 1.420 1.495 1.379 1.556	0.006 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.006 0.006	0.014 0.012 0.013 0.012 0.012 0.011 0.012 0.012 0.010 0.013 0.013 0.015 0.149	1.587 1.415 1.536 1.524 1.536 1.516 1.550 1.563 1.473 1.560 1.449 1.643	1.587 3.002 4.537 6.061 7.597 9.114 10.664 12.227 13.700 15.260 16.709 18.352
1976	January February March	0.001 0.001 0.001	0.074 0.058 0.057	1.531 1.427 1.551	0.006 0.006 0.005	0.015 0.012 0.013	1.626 1.503 1.627	1.626 3.130 4.757
	TOTAL	0.002	0.189	4.509	0.017	0.040	4.757	

See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the footnotes of the previous table. Printed totals may differ slightly from the sum of their

row/column components due to independent rounding.

The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 52.3

percentage snare used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 52.3 percent for 1974 and 1975.

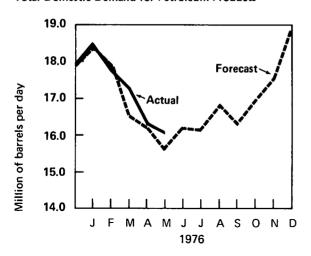
The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 47.7 percent for 1974 and 1975.

^{*}The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.5 percent for 1974 and 1975.

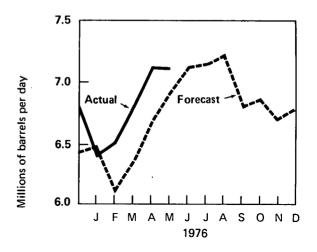
R=Revised data.

Petroleum Consumption and Forecast

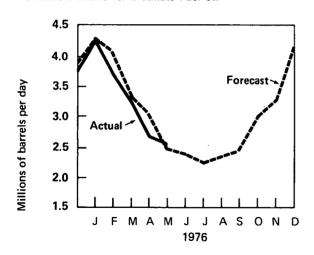
Total Domestic Demand for Petroleum Products



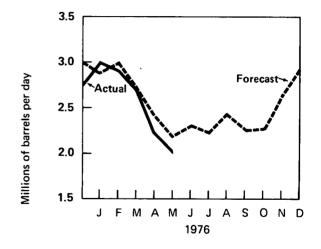
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Notes:

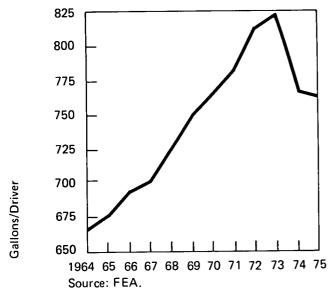
Domestic Demand — Demand for products, in terms of real consumption, is not available; production plus imports plus withdrawals from primary stocks is used as a proxy for consumption. Secondary stocks, not measured by FEA, are substantial for some products.

Actuals —Based on BOM data for January and API data for February through May.

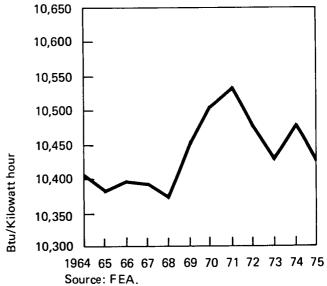
Forecast —See Explanatory Note 5 for discussion of basic assumptions for forecast.

Energy Conservation Indicators

Gasoline Consumption per Licensed Driver*



Average Heat Rate for Fossil Fuel Electric Plants**



Note: Documentation for indicators is available on request.

^{*}See Explanatory Note 13.
**See Explanatory Note 14.

Oil and Gas Exploration

There was a seasonal rise in oil and gas exploration activity during May. The number of rotary drilling rigs in operation increased by 16 to 1,496, reversing the downward trend of the previous 4 months. Nonetheless, the May rig count was still 6.0 percent (92 rigs) below the count for May 1975.

In spite of reduced rig activity, well completions totaled 3,262 during May, 33.6 percent above the number completed last May, and 12.4 percent above the previous month.

The number of seismic crews engaged in petroleum exploration was also seasonally higher during May. A total of 247 (226 land, 21 marine) crews were active, an increase of 5 land crews and 4 marine crews from the level during April. Last May, 254 land and 32 marine seismic crews were at work.

Part 8

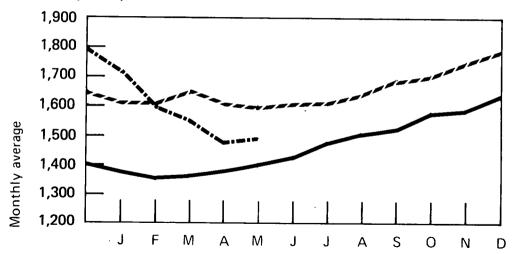
Resource Development

Oil and Gas Exploration

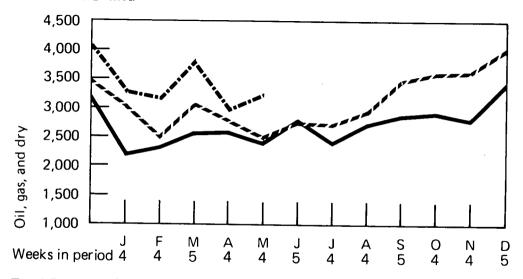
		Rotary Rig in Operatio	s n	We	lls Drilled		Total Foo of Wells D	
		Monthly av	erage Oil	Gas	Dry	Total	Thousands	of feet
1973	January February March April May June July August September October November December	1,219 1,126 1,049 993 1,046 1,118 1,155 1,222 1,266 1,334 1,390 1,405	758 777 953 699 749 767 912 724 854 790 822 1,087	406 487 504 489 407 432 504 456 690 554 606 827 6,385	899 765 909 777 647 795 840 739 940 958 865 1,208	2,063 2,029 2,366 1,965 1,803 1,994 2,256 1,919 2,484 2,302 2,293 3,122 26,592	10,973 10,656 12,318 10,434 9,622 10,815 10,996 9,633 12,075 11,694 11,823 15,530 136,391	
	AVERAGE	1,194	101AL 3,302	0,303	10,000	20,002	,	
1974	January February March April May June July August September October November December	1,372 1,355 1,367 1,381 1,412 1,432 1,480 1,518 1,527 1,584 1,596 1,643	763 901 936 947 957 1,238 1,008 1,210 1,200 1,131 1,088 1,339	577 600 638 700 520 586 461 555 600 551 626 791	803 816 1,003 945 870 982 884 968 1,091 1,241 1,053 1,274	2,143 2,317 2,577 2,592 2,347 2,806 2,353 2,733 2,891 2,923 2,767 3,404	10,392 12,160 12,844 13,349 11,460 12,976 11,802 12,410 12,676 14,081 11,795 15,707	
	AVERAGE	1,475	TOTAL* 12,784	7,240	11,674	31,698	150,551	
1975	January February March April May June July August September October November December	1,615 1,611 1,651 1,604 1,592 1,613 1,616 1,645 1,699 1,716 1,757	1,299 1,097 1,341 1,181 1,100 1,246 1,229 1,272 1,504 1,633 1,619 1,817	655 458 658 506 451 509 557 587 831 682 776 832	1,040 933 1,091 1,071 891 1,022 920 1,122 1,165 1,310 1,270 1,424	2,994 2,488 3,090 2,758 2,442 2,777 2,706 2,981 3,500 3,625 3,665 4,073	13,189 12,071 15,472 13,545 12,054 13,540 12,545 14,221 15,636 16,689 15,788 17,556	
	AVERAGE	R1,660	TOTAL* 16,408	7,580	13,247	37,235	174,434	
1976	January February March April May AVERAGE (5 months)	1,710 1,594 1,540 1,480 1,496	1,465 1,341 1,726 1,237 1,501 TOTAL* 7,234 (5 months)	772 652 821 672 658 3,593	1,055 1,159 1,301 994 1,104	3,292 3,152 3,848 2,903 3,263 16,401	14,517 14,888 18,126 13,765 14,196 75,415	

^{*}Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data. Sources: Rotary Rigs - Hughes Tool Company; Wells - American Petroleum Institute.

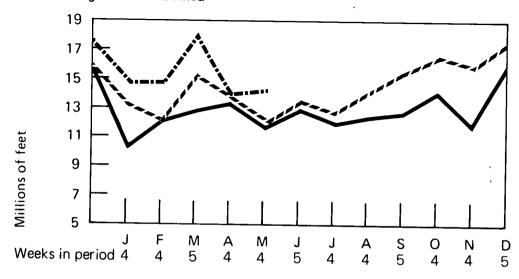
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled



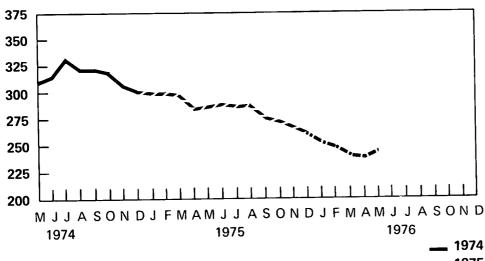
1974 1975

--- 1976

Oil and Gas Exploration (Continued)

	Crews Engag	jed in Seismic Ex	ploration	Line Mile	s of Seismic Exp	loration
	Offshore	Onshore	Total	Offshore	Onshore	Total
1972 Monthly Average	12	239	251	10,306	9,333	19,639
1973 Monthly Average	23	227	250	21,579	10,597	32,175
1974 Monthly Average	31	274	305	28,482	13,219	41,701
1975 Monthly Average	30	253	283	*27,360	*12,206	*39,566
1974 January-April	NA	NA	NA			
May	35	278	313			
June	38	279	317			
July	35	299	334			
August	34	287	321			
September	34	287	321			
October	32	288	320			
November	30	276	306			
December	25	275	300			
1975 January	27	274	301			
February	24	278	302			
March	23	276	299			
April	23	260	283			
May	32	254	286			
June	38	251	289			
July	37	249	286			
August	40	249	289			
September	40	234	274			
October	29	241	270			
November	27	238	265			
December	26	233	259			
1976 January	20	232	252			
February	17	232	249			
March	18	222	240			
April	17	221	238			
May	21	226	247			
AVERAGE (5 months)	18	227	245	•		

Total Seismic Crews



*See Explanatory Note 15. NA=Not available.

Source: Society of Exploration Geophysicists.

-- 1975

___ 1976

Part 9

The national average selling price for regular gasoline increased 0.8 cent in May to 57.4 cents per gallon. This was the first monthly price increase since September 1975. The average price that retailers paid for regular gasoline rose 1.4 cents to 50.0 cents per gallon, dropping the dealer margin to 7.4 cents per gallon, its lowest level since May 1973.

The average price that retailers paid for mid-level unleaded gasoline during May was 61.3 cents per gallon, an increase of 0.8 cent over the price paid in April.

Crude Oil

The preliminary estimate for the average cost of domestic crude purchased by refiners during March was \$8.24 per barrel, 26 cents below the cost in February.

The preliminary estimate for the refiner acquisition cost of imported crude during March was \$13.27 per barrel, 0.6 cent above the price during February.

The preliminary estimate for the composite cost of crude petroleum purchased by refiners during March was \$10.14 per barrel, 17 cents lower than the February figure.

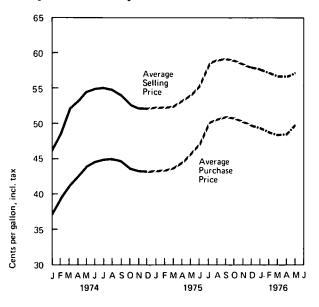
Price

Motor Gasoline

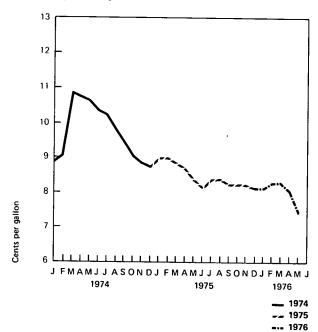
Regular Gasoline at Full Service Retail Outlets

J		Average Selling Price	Average Purchase Price	Average Dealer Margin
		Cents per	gallon, inclu	ding tax*
1973	January February March April May June July August September October November December	37.3 36.8 37.9 38.3 38.5 38.8 38.8 38.7 39.7 41.3 43.3	30.5 30.1 30.8 31.0 31.2 31.2 31.2 31.2 31.1 32.2 33.6 35.1	6.8 6.7 7.1 7.3 7.6 7.6 7.6 7.6 7.7 8.2
	AVERAGE	39.0	31.6	
1974	January February March April May June July August September October November December AVERAGE	46.3 48.8 52.3 53.4 54.7 55.1 55.2 54.9 54.2 52.4 52.0 52.0 52.0 52.8	37.4 39.7 41.4 42.7 44.1 44.8 45.0 45.1 44.8 43.4 43.2 43.3	8.9 9.1 10.9 10.7 10.6 10.3 10.2 9.8 9.4 9.0 8.8 8.7
1975	January February March April May June July August September October November December	52.4 52.5 52.6 53.5 54.3 55.6 58.7 59.2 59.3 58.9 58.4 58.0 56.2	43.4 43.5 43.8 44.9 46.0 47.5 50.3 50.8 51.1 50.7 50.2 49.9	9.0 9.0 8.8 8.6 8.3 8.1 8.4 8.2 8.2 8.2
1976	January February March April May	57.7 57.1 56.6 56.6 57.4	49.6 48.8 48.3 48.6 50.0	8.1 8.3 8.3 8.0 7.4

Average Retail Prices For Regular



Average Margins For Regular



^{*}To derive prices excluding taxes, 12.0 cents per gallon may be deducted for 1973, 12.2 cents per gallon may be deducted for 1974 and 1975, and 12.5 may be deducted for 1976.

Sources: *Platts Oilgram* through September 1973; FEA from October 1973 through December 1974; Lundberg Survey, Inc., from January 1975 forward.

Average Selling Prices at Major and Independent Retail Dealers - May 1976

		ts per gallon, uding tax		Cents per gallon, including tax			
Regular Gasoline—Full Se	ervice		Regular Gasoline—Self Service				
Major	58.1	•	Major	54.9			
Independent	53.9)	Independent	53.1			
National Average	57.4	,	National Average	54.4			
Premium Gasoline—Full S	Service		Premium Gasoline—Self Ser				
Major	63.0)	Major	60.5			
Independent	58.0)	Independent	57.3			
National Average	National Average 62.4			59.6			
Diesel Fuel-Truck Stops	*		Diesel Fuel—Service Stations*				
Major	53.2	!	Major	54.9			
Independent	49.8	}	Independent	51.5			
National Average	51.4	ļ	National Average	52.9			
Unleaded Gasoline	Regular	Mid-Level	Premium				
Major	59.4	61.8	66.1				
Independent	57.9	57.4	60.9				
National Average	59.4	61.3	66.1				

^{*}See Explanatory Note 16.
Source: Lundberg Survey, Inc.

Average Margins for Major and Independent Retail Dealers - May 1976

	Cents per gallon		Cents per gallon
Regular Gasoline—Full Service		Regular Gasoline—Self Service	
Major	7.7	Major	4.3
Independent	6.1	Independent	5.1
National Average	7.4	National Average	4.5
Diesel Fuel-Truck Stops*		Diesel Fuel—Service Stations*	4.5
Major	6.6	Major	7.3
Independent	7.4	Independent	9.0
National Average	6.9	National Average	7.8

^{*}See Explanatory Note 16. Source: Lundberg Survey, Inc.

Average Regional Retail Selling Prices and Dealer Margins for Regular Gasoline at Full Service Retail Outlets — May 1976

FEA Region	Selling Price	Margin
	Cents per gallon,	including tax
1A New England	56.6	7.3
1B Mid Atlantic 1C Lower Atlantic	58.3 58.3	6.4 8.1
2 Mid Continent	57.4	6.9
3 Gulf Coast	54.4 50.5	8.2
4 Rock Mountain 5 West Coast	58.5 59.0	9.7 7.8
		7.0
NATIONAL AVERAGE	57.4	7.4

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Retail Gasoline Price Changes for 21 Leading Refiners During May 1976 and Entitlement Position* During April 1976

Company	Effective Date of Change	Amount of Change	Entitlement Position (April)	
		Cents per gallon		
Amerada Hess American Petrofina Ashland Atlantic Richfield B.P. Cities Service Champlin Continental Exxon Getty Gulf Kerr-McGee Mobil Phillips Shell Standard Oil of California Standard Oil of Indiana Standard Oil of Ohio Sun Texaco Union Oil of California	May 1, 14, 21 May 13, 25 May 4, 13 May 21 May 22 May 6, 14 May 1 May 15, 29 May 7 May 1, 15 May 1, 11 May 1, 7, 29 May 6, 26 May 8, 22 May 20 May 13 May 7 May 22 May 20 May 13 May 7 May 22 May 8, 15 May 8, 15	1.00, 1.00, 1.00 1.00, 1.00 1.00, 1.00 2.00 1.00 0.50, 0.50 3.00 1.00, 1.00 1.70, 1.00 1.00, 1.00 1.00, 1.00 1.00, 1.00 1.00, 1.00 1.00, 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Seller Buyer Seller Seller Seller Buyer Buyer Buyer Seller Buyer Seller Buyer Buyer Seller Buyer	

^{*}See definitions. Source: FEA.

Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners

		Northeast	Mid- Atlantic	Southeast	Central	Western	Southwest	Pacific	National Average
				Cent	s per gallon	, excluding	tax		
1974	January February March April May June July August September October November December AVERAGE	21.4 23.7 25.4 26.7 28.5 29.8 29.9 29.7 29.3 28.0 27.8 27.7	21.4 23.6 25.2 26.1 28.4 29.4 29.3 29.4 28.9 27.2 27.3 27.6	21.1 22.5 24.1 24.8 26.8 28.0 28.0 28.6 28.0 26.6 26.6 26.9	21.3 23.9 25.3 26.0 28.2 29.3 29.4 29.6 28.8 27.5 27.5 27.7	22.2 23.5 24.5 25.6 27.7 29.3 28.9 29.1 28.7 27.0 27.5 27.9	20.1 22.5 24.2 24.7 26.3 27.1 27.8 28.1 27.4 26.2 26.3 26.7	21.0 22.6 25.2 25.0 26.3 27.2 28.0 28.6 27.8 26.6 27.3 27.3	21.2 23.2 24.8 25.6 27.5 28.6 28.8 29.0 28.4 27.0 27.2 27.4
1975	January February March April May June July August September October November December	27.8 28.4 28.9 29.6 30.9 32.4 34.4 35.3 35.2 34.3 34.1 33.7	27.8 28.2 28.8 29.9 31.0 32.5 34.6 35.1 35.1 34.6 34.3 34.1	27.4 27.8 28.4 29.4 30.5 32.0 33.9 34.6 34.5 34.0 33.9 33.6	28.2 28.7 29.1 30.4 31.6 33.1 34.9 35.6 35.4 34.9 34.6 34.3	28.5 28.3 29.0 29.8 31.2 32.6 34.5 35.2 35.0 34.3 34.3 33.8	27.2 27.6 27.8 29.2 30.4 31.6 33.4 34.1 34.1 33.8 33.6 33.3	27.8 27.5 28.0 29.8 31.0 32.6 33.7 34.5 34.5 34.2 34.0 33.7	27.8 28.1 28.6 29.7 30.9 32.4 34.2 34.9 34.8 34.3 34.1 33.8
1976	AVERAGE January February March April May	33.3 33.0 32.4 33.0 34.4	33.9 33.4 33.0 33.5 34.9	33.2 32.6 31.8 32.3 33.6	34.0 33.8 33.4 33.9 35.3	33.2 32.6 32.5 33.2 34.8	33.1 32.9 32.6 33.2 34.8	33.5 33.5 33.2 33.2 34.7	32.0 33.5 33.1 32.7 33.2 34.6

Heating Oil

Retail Heating Oil Price Changes for 21 Leading Refiners During May 1976

Company	Effective Date	Amount of Change
		Cents per gallon
Amerada Hess American Petrofina Ashland Atlantic Richfield B.P. Cities Service	May 1 May 13 May 1 May 21	-1.00 1.00 2.00 1.00 None 0.50 None
Champlin Continental Exxon Getty	May 1	None None 7.00
Gulf Kerr-McGee Mobil Phillips Shell	May 21	None -0.25 None None None
Standard Oil of California Standard Oil of Indiana Standard Oil of Ohio Sun Texaco	May 7 May 13	None 1.00 None -1.00 None
Union Oil of California		None

Residential Heating Oil Prices

		Average Selling Price	Average Purchase Price	Average Dealer Margin
			Cents per gallor	1
1974	January February March April May June July August September October November December	31.1 32.8 33.8 34.0 35.1 35.3 35.2 35.8 36.3 35.6 37.9 36.9	23.4 25.4 25.9 25.9 26.8 27.5 28.1 28.1 28.7 28.9 29.1 28.5 26.9	7.7 7.4 7.9 8.1 8.3 7.8 7.1 7.7 7.6 6.7 8.8 8.4
1975	January February March April May June July August September October November December	37.4 37.0 36.6 36.1 36.7 37.1 37.2 38.0 38.4 39.3 39.4 40.1	29.1 28.7 28.4 29.3 30.0 30.3 30.6 31.2 31.0 31.8 32.1 32.4	8.3 8.3 8.2 6.8 6.7 6.8 6.6 6.8 7.4 7.5 7.3
1976	AVERAGE January February	37.7 40.1 40.1	31.2 32.4 32.4	7.7 7.7

Resident	Residential Heating Oil Prices by Region Fast North Fast South West North West South										
		New England	Mid Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast 🛱	
					Cents per ga	allon				9	
1974	January February March April May June July August September October November	31.9 33.8 31.9 34.3 34.8 35.9 35.2 36.3 37.2 36.7 39.0	31.6 33.5 33.7 34.8 35.6 36.2 35.5 36.1 36.5 35.9 38.7	30.8 32.8 33.9 32.5 36.2 35.8 35.6 37.8 36.1 36.9 37.4	30.3 30.9 34.2 33.5 34.2 34.9 34.4 35.1 35.0 33.3 36.4	29.8 32.0 30.6 33.7 34.4 31.1 30.2 33.7 33.6 34.1 35.3	31.3 32.9 34.5 30.1 32.6 33.6 34.9 35.2 35.8 33.8	NA NA NA NA NA NA NA NA NA NA	30.4 37.2 NA 34.2 34.8 35.9 36.1 NA 32.3 35.6 37.3	30.5 32.8 NA 32.6 37.8 39.1 36.3 35.9 35.1 36.3 36.4 33.9	
1975	December January February March April May June July August September October November December	38.3 40.2 39.2 38.0 37.4 37.6 37.7 37.9 38.8 39.4 40.3 41.0 41.0	38.7 38.9 38.4 37.8 36.8 36.9 37.7 36.9 38.2 38.7 39.9 39.6 41.1	36.8 36.5 36.8 36.4 36.8 36.4 36.9 37.9 37.6 38.3 38.7	34.2 33.4 34.2 33.2 35.1 35.8 36.4 36.3 36.5 37.4 37.9 38.5	34.7 34.7 33.2 33.7 34.7 NA 34.7 35.7 35.7 36.6 NA 34.1	33.5 34.0 33.3 34.3 34.5 35.4 35.9 36.8 36.3 36.8 37.9 38.1 38.0	N A	35.8 37.5 36.6 NA 38.9 37.0 37.6 NA 41.3 38.9 39.0 40.2 44.8	38.0 37.7 36.8 36.8 37.8 37.6 38.8 39.3 40.1 41.0 41.3 40.9	
1976	January February	41.3 41.1	40.6 41.6	39.9 39.2	38.6 38.5	NA 37.2	39.0 38.9	NA NA	40.2 NA	42.0 40.8	

NA=Not available. Source: FEA.

Average Distributor Purchase Prices for Heating Oil by Region

		New England	Mid Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast
		2			Cents per ga		00111101	00111101		West Godst
4074		00.0	00.4							
1974	January	22.3	23.4	23.3	23.8	23.5	24.0	NA	22.5	23.0
	February	24.9	25.5	25.3	24.8	25.2	26.4	NA	29.7	25.3
	March	24.9	25.0	26.3	25.6	24.0	27.0	NA	NA	NA
	April	25.7	26.0	26.0	27.1	26.3	24.0	NA	26.8	26.0
	May	26.3	27.0	27.5	27.3	27.4	25.8	NA	27.1	26.2
	June	27.5	27.6	27.8	29.0	25.4	27.4	NA	27.3	28.0
	July	28.1	28.2	28.3	27.5	25.2	28.5	NA	28.2	29.1
	August	28.1	28.2	27.9	27.5	29.3	28.8	NA	NA	28.2
	September	29.2	28.9	28.5	27.8	28.2	28.4	NA	29.3	28.8
	October	29.9	29.4	28.8	27.7	28.3	27.4	NA	29.9	29.2
	November	29.8	29.7	28.8	27.8	29.1	27.6	NA	27.9	29.8
	December	29.3	29.4	28.4	27.4	28.8	26.7	NA	29.3	27.0
1975	January	30.3	29.7	28.5	27.2	28.8	27.5	NA	28.5	29.7
	February	29.6	29.3	28.6	27.2	28.8	27.3	NA	29.4	28.5
	March	29.5	29.3	29.1	28.1	26.8	28.1	NA	NA	27.6
	April	29.4	29.5	29.7	28.3	27.8	29.5	NA	29.0	28.5
	May	30.5	30.0	30.0	30.0	28.8	29.4	NA	30.9	28.7
	June	30.4	30.2	30.6	30.5	NA	30.7	NA	31.8	29.0
	July	30.7	30.1	29.9	31.6	28.8	31.4	NA	NA	30.4
	August	31.6	30.8	30.9	31.2	29.8	30.2	NA	31.6	32.8
	September	31.4	30.9	30.7	30.6	29.8	30.6	NA	31.9	31.4
	October	32.0	31.9	31.3	31.5	31.1	31.4	NA	34.4	32.5
	November	32.5	31.7	32.0	32.1	NA	32.0	NA	34.1	32.3
	December	32.9	32.7	31.8	32.0	29.4	31.4	NA	33.9	32.8
1976	January February	32.5 32.8	32.5 32.9	31.9 31.6	32.3 31.9	NA 31.3	32.3 32.1	NA NA	33.6	32.9
	repruary	32.8	32.9	31.6	31.9	31.3	32.1	NA	NA	31.1

NA=Not available. Source: FEA.

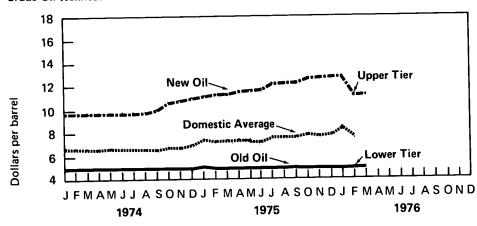
Crude Oil

Domestic Crude Petroleum Prices at the Wellhead*

		Old	New	Domestic Ave	rage
		Do	llars per ba	rrel	
1974	January	R5.03	9.82	6.95	
	February	R5.03	9.87	6.87	
	March	R5.03	9.88	6.77	
	April	R5.03	9.88	6.77	
:	May	R5.03	9.88	6.87	
	June	R5.03	9.95	6.85	
	July	R5.03	9.95	6.80	
	August	R5.03	9.98	6.71	
	September	R5.03	10.10	6.70	
	October	R5.03	10.74	6.97	
	November	R5.03	10.90	6.97	
	December	R5.03	11.08	7.09	
	AVG.	R5.03	10.13	6.87	
1975	January	R5.05	11.28	7.61	
	February	R5.03	11.39	7.47	
	March	R5.03	11.47	7.57	
	April	R5.03	11.64	7.55	
	May	R5.03	11.69	7.52	
	June	R5.03	11.73	7.49	
	July	R5.03	12.30	7.75	
	August	R5.03	12.38	7.73	
	September	R5.04	12.46	7.75	
	October	R5.03	12.73	7.83	
	November	R5.03	12.89	7.80	
	December	R5.03	12.95	7.93	
	AVG.	R5.03	12.03	7.67	
1976	January	R5.02	12.99	8.63	
		Lower	Upper		
		Tier**	Tier**		
	February	5.07 R	***11.29	***7.66	
	March	•	***11.38	NA	

Source: FEA.

Crude Oil Wellhead Price



^{*}See Explanatory Note 17.

**See definitions.

***Preliminary figure based on early reports.
R=Revised data. NA=Not available.

Percentage of Domestic Production Sold at Controlled and Uncontrolled **Prices**

		Controlled	Uncontrolled		
		Old Oil	New Oil	Released	Stripper
1975	January* February* March April May June July August September* October November December	58 61 60 61 62 63 62 63 63 63 64 63	19 17 18 17 17 16 16 16 15 16	10 9 10 9 8 8 8 7 7 7 7	12 12 12 12 13 13 14 14 14 14
	AVERAGE	62	16	8	13
1976	January February	54 58	21 28	10 -	15 14

*Totals do not add to 100 due to rounding.
Source: FEA Crude Petroleum Production Monthly Report.

Crude Oil (Continued)

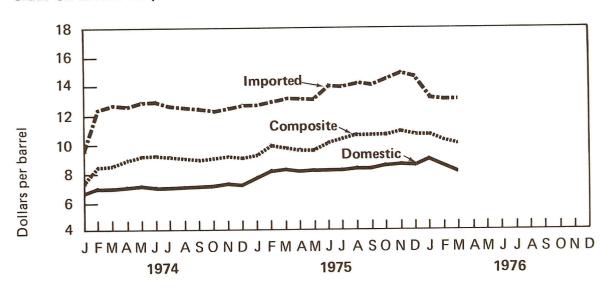
Refiner Acquisition Cost of Crude Petroleum*

		Domestic**	Imported	Composite
		D	ollars per barre	el
1974	January February March April May June July August September October November December	6.72 7.08 7.05 7.21 7.26 7.20 7.19 7.20 7.18 7.26 7.46 7.39	9.59 12.45 12.73 12.72 13.02 13.06 12.75 12.68 12.53 12.44 12.53 12.82	7.46 8.57 8.68 9.13 9.44 9.45 9.30 9.17 9.13 9.22 9.41 9.28
	AVERAGE	7.18	12.52	9.07
1975	January February March April May June July August September October November December	7.78 8.29 8.38 8.23 8.33 8.37 8.48 8.49 8.68 8.67 8.66 8.39	12.77 13.05 13.28 13.26 13.27 14.15 14.03 14.25 14.04 14.66 15.04 14.81 13.93	9.48 10.09 9.91 9.83 9.79 10.33 10.57 10.81 10.79 10.85 11.05 10.98
1976	January February March	R9.14 ***8.50 ***8.24	13.27 ***13.21 ***13.27	10.76 ***10.31 ***10.14

R=Revised data.

Source: FEA.

Crude Oil Refiner Acquisition Cost



^{*}See Explanatory Note 18.

**See Explanatory Note 17.

***Preliminary data.

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

		Algeria	Canada	Indonesia	Iran	Nigeria	Saudi Arabia	U. A. Emirates	Venezuela
					Dollars	per barrel			
1974	January	NA	6.70	NA	8.53	12.13	NA	NA	10.28
	February	NA	10.90	NA	12.11	12.74	NA	NA	11.31
	March	NA	11.14	12.13	13.02	13.26	NA	NA	11.78
	April	13.63	11.02	12.49	12.83	13.67	11.59	NA	11.38
	May	14.67	11.47	12.95	13.84	13.83	11.53	NA	11.28
	June	14.43	12.56	13.21	13.44	13.03	11.32	13.06	10.39
	July	13.65	12.65	13.77	13.02	12.75	11.97	12.34	10.64
	August	13.96	12.49	14.38	12.31	12.70	12.16	12.69	11.20
	September	13.83	12.51	13.42	11.87	12.28	11.45	NA	11.01
	October	13.20	12.53	14.24	12.07	12.12	11.51	12.84	10.95
	November	13.43	12.33	13.45	12.15	12.83	12.15	13.54	11.15
	December	13.08	12.15	14.15	11.63	12.88	11.75	14.59	11.37
1975	January	12.72	12.43	13.30	12.11	12.07	12.07	13.14	11.37
	February	12.11	12.15	13.52	11.86	12.18	11.94	12.67	11.56
	March	12.46	12.79	13.94	12.08	12.56	11.78	13.40	11.66
	April	12.36	12.95	13.71	12.34	12.46	12.16	12.55	11.61
	May	12.41	12.08	13.71	11.93	12.34	12.27	13.29	11.54
	June	12.37	11.90	13.73	12.51	12.49	11.93	12.48	11.51
	July	12.69	12.15	13.98	11.83	12.37	12.08	12.78	11.46
	August	12.68	12.27	13.85	12.17	12.32	12.10	12.60	11.44
	September	12.52	12.63	13.75	11.97	12.42	12.17	12.49	11.42
	October	13.45	13.02	14.00	12.27	13.18	12.64	12.85	12.08
	November	13.28	14.00	13.81	12.47	13.37	12.58	13.23	12.38
	December	13.46	13.96	13.92	13.01	13.57	12.93	13.21	12.31
1976	January	13.56	12.95	13.89	13.01	13.61	13.18	13.50	11.60
	February	13.57	13.24	13.94	12.87	13.52	13.10	13.36	12.09
	March	13.83	13.30	13.94	12.77	13.62	13.18	13.37	11.71
	April**	13.73	13.61	13.78	12.91	13.60	13.11	13.18	11.95

^{*}See Explanatory Note 18. **Preliminary data.

Crude Oil (Continued)

Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate	Motor Gasoline	Aviation Jet Fuel*	Other Products	Total
			Milli	ons of dollars		
1974	January February March April May June July August September October November December	116 184 198 223 261 326 355 392 409 295 245 209	91 87 85 215 255 394 325 349 431 424 475 413		43 175 237 346 446 630 648 665 650 531 595 492	250 446 520 783 963 1,350 1,327 1,405 1,490 1,250 1,315 1,114
1975	January February March April May June July August September October November December	254 300 282 302 292 284 233 280 347 338 426 446	431 418 452 485 370 266 219 344 335 245 275 211		672 790 966 807 771 785 624 583 661 673 796 826	1,357 1,508 1,700 1,594 1,433 1,334 1,075 1,208 1,342 1,255 1,497 1,483
1976	January	336	242	131	515	1,224

^{*}Prior to January 1976 refiners were not required to maintain separate banks for aviation jet fuel. Source: FEA.

Entitlement Prices*

		Dollars
1974	November December	5.00 5.00
1975	January February March April May June July August September October November December	6.00 6.75 7.31 7.29 7.39 7.82 8.13 8.31 8.31 8.62 8.94 8.55
1976	January February March April	8:09 7.85 7.89 7.85

^{*}See definitions. Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

			PURCHASES			SALES	
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
				Cents per thousand cub	ic feet		
1974	January February March April May Jüne July August September October November December	24.3 25.4 25.7 25.8 25.7 26.0 26.3 26.1 27.3 27.5 28.5 32.6	42.7 43.2 43.2 46.4 49.3 47.7 58.7 57.5 58.8 58.9 70.9 74.5	25.7 26.8 27.0 27.4 27.5 27.5 28.6 28.4 29.5 29.9 31.7 35.8	48.1 49.8 50.8 49.3 49.9 50.8 52.5 55.2 54.7 56.3 58.7 60.3	55.0 56.4 56.9 57.6 58.6 59.4 62.0 64.4 65.2 64.4 66.8 67.2	55.1 56.4 56.9 57.4 57.9 58.5 61.1 63.5 64.3 64.0 66.6
1975	January February March April May June July August September October November December	29.8 29.5 31.6 32.9 34.7 35.3 36.9 35.5 36.5 36.1 36.5 35.9	104.0 105.8 102.5 102.8 100.6 98.3 101.1 141.0 141.2 140.1 162.5 161.8	35.2 35.2 37.0 38.3 39.8 40.2 41.8 43.3 44.5 44.3 46.7 46.0	67.6 70.1 70.4 71.1 71.1 72.2 73.9 73.4 72.8 77.2 77.8 81.1	71.1 74.1 77.8 82.3 83.7 85.2 84.7 85.6 85.9 86.1 86.9 79.6	71.4 74.4 77.9 81.9 82.8 84.0 83.6 84.3 84.6 85.6 86.6 80.1
1976	January February	38.6 39.5	164.0 165.3	48.6 49.5	87.5 87.7	88.7 92.3	89.2 92.7

^{*}Represents direct sales by pipelines to industrial users. Does not include sales to industrial users by resellers. **Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt. Source: Federal Power Commission.

Average Retail Prices for Natural Gas Sold to Residential Customers for Heating Use

		Price
		Cents per thousand cubic feet
1974	January February March April May June July August September October November December	113.3 115.2 116.9 118.2 119.9 120.3 122.0 124.2 125.6 127.4 131.4 134.2
1975	January February March April May June July August September October November December	137.9 141.3 142.7 147.1 150.1 152.1 151.1 151.8 155.7 156.3 162.3 166.2
1976	January February March April May	167.4 171.1 172.9 174.2 176.6

Source: Bureau of Labor Statistics.

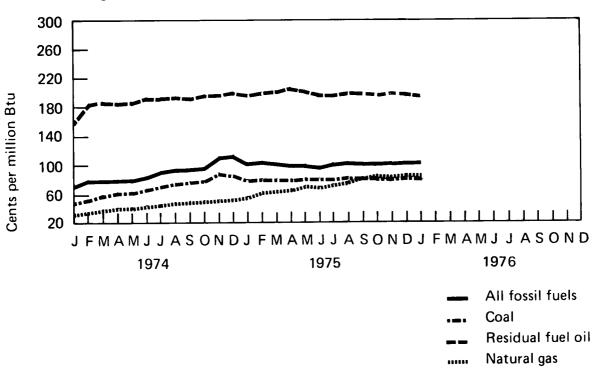
Utility Fossil Fuels

COST OF FOSSIL FUELS DELIVERED TO STEAM-ELECTRIC UTILITY PLANTS

All Fossil Fuels*													
Cents per million Btu						1975							1976
Region	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ост	NOV	DEC	JAN
New England	193.6	198.8	192.2	196.3	190.5	192.7	189.5	188.0	182.9	182.3	181.2	177.6	181.3
Middle Atlantic	145.2	147.1	141.3	138.3	138.5	140.4	154.5	144.5	132.7	133.7	140.8	140.8	143.6
East North Central	86.6	85.6	86.9	86.6	87.4	87.5	89.2	90.1	88.2	87.0	89.5	92.6	89.9
West North Central	63.5	6 9 .0	85.5	64.5	60.3	62.8	63.0	62.7	63.9	62.6	62.5	65.7	72.7
South Atlantic	125.1	120.2	120.4	120.4	120.1	122.5	126.8	125.2	124.4	118.4	117.0	121.3	122.0
East South Central	79.4	83.1	83.0	83.0	84.8	85.3	86.2	84.5	85.2	83.8	84.5	85.5	88.5
West South Central	59.8	67.4	68.9	70.0	72.9	71.2	76.0	77.5	79.1	79.6	77.0	82.8	88.0
Mountain	54.6	62.9	54.5	51.7	52.1	50.9	51.8	50.4	55.0	50.1	52.3	55.6	50.4
Pacific	190.0	194.4	196.3	209.7	187.3	154.5	147.1	171.3	174.5	177.2	206.6	222.7	214.0
NATIONAL AVG.	104.3	106.4	104.2	101.5	101.0	99.3	102.5	103.8	103.7	101.2	102.4	106.9	107.3

^{*}See Explanatory Note 19.

National Average



^	_	_	

-													
Cents per million Btu	ı					1975							1976
Region	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ОСТ	NOV	DEC	JAN
New England Middle Atlantic East North Central West North Central South Atlantic East South Central West South Central Mountain Pacific	113.0 99.1 80.0 56.7 102.3 76.3 21.0 27.9 38.4	104.7 78.4 57.9 97.0 79.5 21.0 30.6	126.9 99.7 79.3 59.4 97.4 80.1 21.0 32.0 57.2	135.4 98.2 80.4 60.9 100.8 80.1 21.0 30.3 56.8	125.7 101.7 82.0 57.7 98.8 81.5 21.0 31.1 57.0	58.9 98.4 80.5 21.0 31.0	119.2 105.5 82.3 60.8 101.6 79.5 24.0 33.1 58.2	127.3 103.8 84.3 60.7 101.4 79.1 24.0 32.2 58.8	120.4 98.6 83.4 61.3 102.4 80.8 24.0 32.8 58.9	128.7 101.8 82.1 61.2 98.6 80.7 24.0 31.7 58.4	127.6 106.1 83.8 60.6 98.5 82.3 24.0 33.5 59.5	120.8 104.0 85.7 58.2 100.1 81.9 24.0 36.1 58.9	124.2 102.8 83.1 59.2 98.3 83.9 26.4 34.1 72.7
NATIONAL AVG.	80.9	81.7	80.6	80.5	81.8	81.4	80.8	82.1	82.1	81.5	81.7	82.2	80.2
Residual Fuel Oil*													
Cents per million Btu						4075							
	1001	ככם	***	400		1975							1976
Region	JAN 202.5	FEB	MAR	APR	MAY	JUNE	JULY		SEPT	OCT	NOV	DEC	JAN
New England Middle Atlantic East North Central West North Central South Atlantic East South Central West South Central Mountain Pacific	202.5 202.7 144.9 189.6 180.9 174.0 177.1 192.3 223.6	204.1 204.1 165.0 182.3 181.6 171.6 178.2 192.4 235.0	204.3 204.4 163.4 171.5 186.8 163.4 175.8 190.3 241.1	202.9 203.2 183.1 167.8 188.9 159.7 191.5 206.0 261.1	200.1 200.1 157.0 163.9 187.7 161.0 177.7 198.0 260.6	201.7 201.5 168.3 165.5 189.3 165.5 182.0 199.0 245.6	196.3 200.4 185.2 161.1 185.4 167.8 186.2 209.1 253.8	192.6 199.3 191.7 157.5 183.8 175.0 185.2 221.3 258.1	187.9 191.2 205.9 150.3 181.5 174.4 174.4 223.7 257.9	184.1 192.2 189.7 153.5 180.7 175.5 168.4 210.3 255.5	184.8 191.5 211.4 161.6 179.8 180.4 189.2 195.8 261.9	181.0 191.6 192.4 157.1 173.0 171.4 187.9 202.3 259.7	182.5 191.3 197.0 173.1 174.6 172.8 195.3 206.8 246.6
NATIONAL AVG.	197.7	202.0	204.8	209.3	205.6	200.0	198.9	200.8	200.5	197.0	200.5	198.1	194.1
Natural Gas**													
Cents per million Btu						1975							1976
Region	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ост	NOV	DEC	JAN
New England Middle Atlantic East North Central West North Central South Atlantic East South Central West South Central Mountain Pacific	NA 86.1 91.0 43.6 60.3 76.2 55.6 66.9 83.2	NA 84.5 92.7 43.8 68.5 79.5 63.0 66.7 83.6	97.1 82.4 93.0 51.5 72.6 82.2 64.5 63.7 80.5	112.4 101.7 105.5 54.5 70.2 82.7 67.0 67.4 90.1	110.8 98.3 120.8 58.6 71.2 76.4 71.3 68.1 82.4	121.7 92.7 111.6 58.1 72.2 77.0 69.2 69.6 84.1	122.1 91.2 103.4 59.2 68.9 91.0 72.7 71.8 89.7	154.1 87.6 104.6 56.9 69.7 95.9 75.7 71.1	137.7 87.6 114.0 57.8 76.4 110.3 77.9 78.6 115.2	135.6 90.5 120.2 55.4 79.6 105.5 79.7 82.0 122.4	133.8 103.1 128.3 55.8 78.5 120.2 77.6 86.2 136.9	157.7 105.0 136.8 55.9 80.8 146.6 80.3 90.4 151.1	166.1 107.8 126.8 56.1 75.1 156.6 83.5 86.2 141.2
NATIONAL AVG.	58.2	65.2	66.4	68.9	72.6	71.3	74.8	79.1	83.8	85.5	83.5	86.1	86.5

NA TNot available.

*See Explanatory Note 19.

**Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.

Source Federal Power Commission.

Utility Fossil Fuels (Continued)

U.S. Average Delivered Prices of Coal at Utilities

		Contract	Spot	
		In dollars p	er short ton	
1973	January February March April May June	8.09 8.31 8.42 8.43 8.51 8.62	9.91 10.01 10.07 10.44 10.24 10.43	
	July August September October November December	8.44 8.45 8.71 8.86 9.13 9.19	10.40 10.44 10.67 11.24 12.05 13.34	
1974	January February March April May June July August September October November December	9.83 10.40 10.63 11.28 11.80 11.87 12.05 12.50 12.89 13.30 14.16 14.20	17.02 20.57 22.54 23.70 24.21 25.84 27.99 28.87 30.64 30.67 31.95 31.05	
1975	January February March April May June July August September October November December	14.57 15.71 15.68 15.88 16.45 16.40 16.06 16.65 16.76 16.72 16.79 16.90	28.12 25.93 25.02 24.52 23.78 23.36 22.35 22.39 22.46 22.52 22.50 22.40	
1976	January	16.53	21.75	

Source: Federal Power Commission.

Petroleum Consumption

Petroleum consumption in the nations belonging to the International Energy Agency was generally higher during the first quarter of 1976 compared with the same period of the previous year. Canada showed a 3.1-percent rise over 1975; consumption in Italy was 4.6 percent higher; and France, which is not an IEA member, reported an 11.9-percent increase. Japan registered a minor decrease of 0.6 percent.

Crude Oil Production

Crude oil production in the member nations of the Organization of Petroleum Exporting Countries dropped about 0.5 million barrels per day between March and April; most of the decrease was accounted for by Iraq. Canada also reported a substantial decline of 510,000 barrels per day, but this was largely explained by a change in the method of reporting production. Earlier Canadian figures were overstated because they were based on "potential" production and included about 300,000 barrels per day of natural gas liquids. Hereafter, the Canadian figures should be more comparable to those cited for the other countries in this report.

The correction in the Canadian figures and the increased shut-in by Iraq explain most of the nearly 1 million-barrel-per-day drop in world crude oil production in April to 55 million barrels per day.

International

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

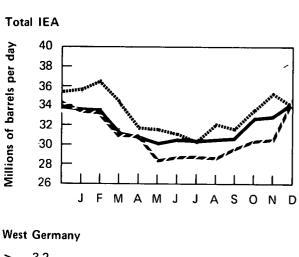
		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
		Thousands of barrels per day							
1973	Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec AVG.	35,700 36,600 34,100 31,600 31,500 31,200 30,100 32,200 31,500 33,700 35,400 33,900 33,104	4,121 4,532 4,450 4,008 3,822 3,950 3,783 3,790 3,813 4,212 4,562 4,716 4,144	2,868 2,850 2,707 2,809 2,546 2,674 2,196 2,738 2,618 2,969 2,883 2,481 2,693	2,743 2,687 2,528 2,296 1,890 1,685 1,566 1,495 1,932 2,482 2,593 2,768 2,219	2,315 2,313 2,271 2,038 1,939 1,697 1,637 1,615 1,727 2,150 2,258 1,906 1,974	1,667 1,747 1,584 1,431 1,486 1,474 1,490 1,557 1,427 1,680 1,801 1,828 1,597	1,781 1,866 1,710 1,420 1,285 1,255 1,303 1,255 1,462 1,610 R1,552 1,698 R1,515	4,281 4,351 4,185 3,971 3,819 3,679 3,355 3,832 3,833 3,877 3,853 3,733 3,863
1974	Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec AVG.	33,700 33,700 31,200 30,600 30,000 30,100 30,000 30,600 30,700 32,800 33,000 34,300 31,775	4,273 4,708 4,508 3,804 3,718 3,710 3,573 3,787 3,868 3,843 4,075 4,401 4,019	2,556 1,969 2,173 2,539 2,403 2,414 2,548 2,476 2,473 2,613 2,432 2,261 2,408	2,523 2,389 2,249 1,970 1,915 2,103 1,703 1,506 1,996 2,045 2,260 2,492 2,094	2,045 2,127 2,133 1,899 1,704 1,545 1,531 1,513 1,663 2,049 2,108 1,983 1,857	1,823 1,863 1,658 1,560 1,572 1,455 1,534 1,463 1,414 1,680 1,713 1,831	1,755 1,760 1,579 1,421 1,349 1,314 1,368 1,287 1,527 1,569 1,580 1,753	3,978 3,902 3,504 3,458 3,534 3,486 3,445 3,528 3,761 4,021 3,877 4,074 3,711
1975	Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec AVG.	33,600 33,600 31,000 30,800 28,200 28,800 28,700 29,800 30,500 30,600 34,600	3,850 4,242 3,978 3,448 3,296 3,325 3,437 3,568 3,568 3,584 3,940 4,519 3,712	2,183 2,455 2,234 2,431 2,253 2,106 2,319 2,360 2,309 2,328 2,361 R2,502 2,319	R2,190 R2,243 R1,952 R2,202 R1,640 R1,642 R1,491 R1,300 R1,785 R1,914 R2,074 R2,653	1,981 1,906 1,731 1,826 1,482 1,414 1,322 1,208 1,502 1,704 1,723 1,821 R1,613	1,691 1,870 1,558 1,592 1,474 1,550 1,536 1,445 1,475 1,544 1,543 1,855 1,593	R1,792 R1,767 R1,558 R1,530 R1,174 R1,289 R1,234 R1,105 R1,465 R1,679 R1,448 R1,600	3,942 4,000 3,455 3,762 2,827 3,438 3,182 3,381 3,537 3,680 3,594 4,343 3,592
1976	Jan Feb Mar Apr AVG .	NA NA NA NA	4,151 4,379 4,109 NA 4,209	2,459 2,490 NA NA	R2,426 R2,484 R2,370 2,109	1,667 1,896 NA NA	1,748 1,730 1,788 NA 1, 756	R1,748 1,713 1,621 NA 1,694	NA NA NA NA

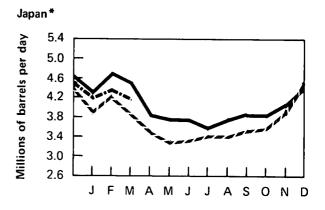
Note: All recent figures are estimates.

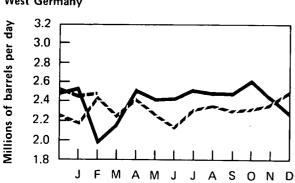
^{*}The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United States, inland consumption excludes bunkers, refinery fuel, and losses.

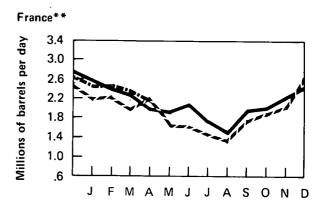
^{**}Excludes liquefied petroleum gases and condensates. ***Not a member of IEA. ttExcludes the United States. NA=Not available.

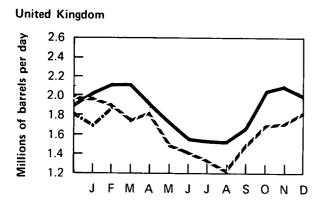
[†]Principal products only.

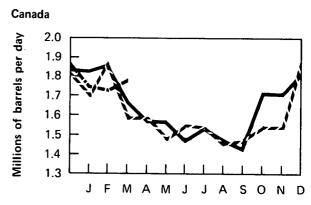


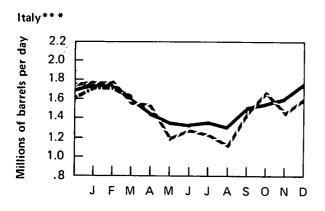


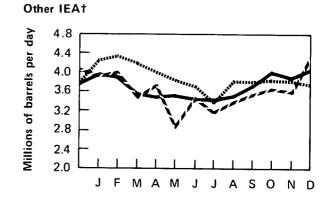












- *Excludes liquefied petroleum gases and condensates.

 **Not a member of IEA.
- ***Principal products only.
- †Excludes the United States.

Crude Oil Production

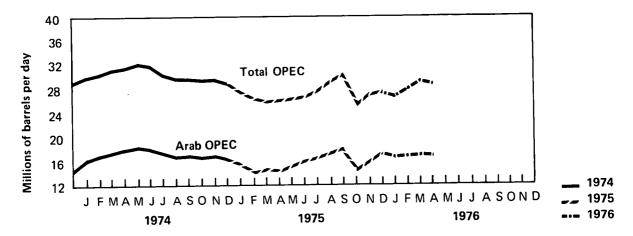
Crude Oil Production for Major Petroleum Exporting Countries - April 1976

Country	Production			Production Capacity	Production Shut in		
				1976			
	1973	1974	1975	April	April	April	
	Thousands of barrels per day						
Algoria	1,070	960	930	1,000	1,000	0	
Algeria Iraq	2,015	1,975	2,250	1,550	3,000	48.3	
Kuwait*	3,020	2,545	2,100	1,890	3,500	46.0	
Libya	2,175	1,520	1,520	1,860	2,500	25.6	
Qatar	570	520	440	490	700	30.0	
Saudia Arabia*	7,600	8,480	7,080	8,270	11,500	28.1	
United Arab Emirates	1,530	1,680	1,700	1,880	2,360	20.3	
Subtotal: Arab OPEC	17,980	17,680	16,020	16,940	24,560	31.0	
Ecuador	210	175	160	200	200	0	
Gabon	150	200	220	220	250	12.0	
Indonesia	1,340	1,375	1,310	1,530	1,700	10.0	
Iran	5,860	6,020	5,350	5,500	6,500	15.4	
Nigeria	2,055	2,255	1,790	2,060	2,500	17.6	
Venezuela	3,365	2,975	2,350	2,400	2,900	17.2	
Subtotal: Non-Arab							
OPEC	12,980	13,000	11,180	11,910	14,050	15.2	
Total: OPEC	30,960	30,680	27,200	28,850	38,610	25.3	
Canada	1,800	1,695	1,470	1,160	1,800	42.2	
Mexico	465	580	720	800	850	5.9	
Total: OPEC, Canada							
Mexico	33,225	32,955	29,390	30,810	41,260	25.3	
Total World	55,740	55,885	53,170	55,000			

^{*}Includes about one-half of Neutral Zone production which amounted to approximately 400,000 barrels per day in April.

Source: Central Intelligence Agency.

OPEC Countries Crude Oil Production



Definitions

Base Production Control Level

- 1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold from a particular property in the same month of 1972. If domestic crude oil was not produced and sold from that property in every month of 1972, the total number of barrels of domestic crude oil produced and sold from that property in 1972, divided by 12.
- 2. Effective February 1, 1976: the total number of barrels of old crude oil produced and sold from the property during calendar year 1975, divided by 365, and multiplied by the number of days in the particular month during 1975. A producer may elect to use the total number of barrels of crude oil produced and sold from the property during calendar year 1972, divided by 366, and multiplied by the number of days in the particular month during 1972.

Branded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products pursuant to (1) an agreement or contract with a refiner (or a firm which controls, is controlled by, or is under common control with such refiner) to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner (or any such firm), or (2) an agreement or contract under which any such firm engaged in the marketing or distribution of refined petroleum products is granted authority to occupy premises owned, leased, or in any way controlled by a refiner (or firm which controls, is controlled by, or is under common control with such refiner), but which is not affiliated with, controlled by, or under common control with any refiner (other than by means of a supply contract, or an agreement or contract described in parts (1) or (2) of this definition), and which does not control such refiner.

Ceiling Price

The maximum permissible selling price, prior to February 1, 1976, for a particular grade of domestic crude oil in a particular field is the May 15, 1973, posted price plus \$1.35 per barrel.

Controlled Crude Oil

Crude oil that was domestically produced prior to February 1, 1976, subject to the ceiling price for crude oil. For a particular property which is not a stripper well lease, the volume of controlled oil equals the base production control level minus an amount of released oil equal to the new oil production from that property.

Crude Oil Domestic Production

The volume of crude oil flowing out of the ground. Domestic production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

Crude Oil Imports

The monthly volume of crude oil imported which is reported by receiving refineries, including crude oil entering the U.S. through pipelines from Canada.

Crude Oil Input to Refineries

Total crude oil used as input for the refining process, less crude oil lost or used for refinery fuel.

Crude Oil Stocks

Stocks held at refineries and at pipeline terminals.

Cumulative Deficiency

A measure of the cumulative deficit of production below the base production control level after the first month in which new oil was produced and sold from a specific property.

Dealer Tankwagon (DTW) Price

The price at which a retail dealer purchases gasoline from a distributor or a jobber.

Distillate Fuel Oil

The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel. Minor quantities of distillate fuel oils produced and/or held as stocks at natural gas processing plants are not included in this series.

Domestic Demand for Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net increase in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies.

Electricity Production

Production at electric utilities only. Does not include industrial electricity generation.

Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month.

An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by FEA. A refiner must purchase entitlements for the amount of his "deemed old oil" receipts in excess of the national domestic crude oil supply ratio (NDCOSR). The NDCOSR, as calculated by FEA, reflects the differences in costs to refiners of "old" oil, "upper tier" crude oil, and imported crude oil.

Entitlement Price

The price of an entitlement, fixed by FEA, is the exact differential as reported for the month between the weighted average cost per barrel to refiners of "old" oil and of imported crude oil, less 21 cents, such cost to be equivalent to the delivered cost to the refinery.

Firm Natural Gas Service

High priority gas service in which the pipeline company is under contract to deliver a specified volume of gas to the customer on a non-interruptible basis. Residential and small commercial facilities usually fall into this category.

Interruptible Natural Gas Service

Low priority gas service in which the pipeline company has the contractual option to temporarily terminate deliveries to customers by reason of claim of firm service customers or higher priority users. Large commercial facilities, industrial users, and electric utilities usually fall into this category.

Jet Fuel

Includes both naphtha-type and kerosine-type fuels meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes, such as for generating electricity in gas turbines.

Jobber

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

Jobber Margin

The difference between the price at which a jobber purchases refined product from a refiner or terminal operator and the price at which the jobber sells to retail outlets. This does not reflect margins obtained by jobbers through retail sales or commercial accounts.

Johher Price

The price at which a petroleum jobber purchases refined product from a refiner or terminal operator.

Landed Cost

The cost of imported crude oil equal to actual cost of crude at point or origin plus transportation cost to the United States.

Limited Work Authorization

A Limited Work Authorization (LWA) may be granted by the Atomic Safety and Licensing Board of the Nuclear Regulatory Commission to an applicant who wants to construct a nuclear powerplant providing that the project has been cleared for all requirements of the National Environmental Protection Act and that the geologic and topographic suitability of the reactor site has been found satisfactory. The LWA allows an applicant to proceed with site excavation, install temporary construction and service facilities, construct service roads, and erect structures and components not subject to normal quality assurance inspections. It may save a utility from 6 to 8 months in total construction time. However, because the ultimate approval of a construction permit is based on all evidence revealed during the licensing hearings, the successful award of an LWA is no guarantee that a construction permit will also be granted.

Line Miles of Seismic Exploration

The distance along the earth's surface that is covered by seismic traverses.

Lower Tier Crude Oil

Old crude oil.

Lower Tier Ceiling Price Determination

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; and (2) \$1.35 per barrel.

Major Brand

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 20 or more States.

Motor Gasoline Production

Total production of motor gasoline by refineries, measured at refinery outlet. Relatively small quantities of motor gasoline are produced at natural gas processing plants, but these quantities are not included.

Motor Gasoline Stocks

Primary motor gasoline stocks held by gasoline producers. Stocks at natural gas processing plants are not included.

Natural Gas Liquids (NGL)

Products obtained from natural gasoline plants, cycling plants, and fractionators after processing the natural gas. Included are ethane, liquefied petroleum (LP) gases (propane, butane, and propane-butane mixtures), natural gasoline, plant condensate, and minor quantities of finished products such as gasoline, special naphthas, jet fuel, kerosine, and distillate fuel oil.

New Crude Oil

- 1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the base production control for that month and less the current cumulative deficiency.
- 2. Effective February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the property's base production control level for that month and less the current cumulative deficiency since February 1, 1976.

Nonbranded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products, but which (1) is not a refiner, (2) is not a firm which controls, is controlled by, is under common control with, or is affiliated with a refiner (other than by means of a supply contract), and (3) is not a branded independent marketer.

Old Crude Oil

- 1. Prior to February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month and less the total number of barrels of released crude oil for that property in that month.
- 2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

Power Ascension Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but which is in the initial testing phase during which production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer, and places it in "commercial operation" status. A request is then submitted to the appropriate utility rate commission to include the powerplant in the rate base calculation.

Primary Stocks of Refined Petroleum Products

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

Property

Property means the right to produce domestic crude oil, which arises from a lease or from a fee interest.

Refined Petroleum Products Imports

Imports (into the 50 States and the District of Columbia) of motor gasoline, naphtha-type jet fuel, kerosine-type jet fuel, kerosine, distillate fuel oil, residual fuel oil, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, waxes, asphalt, natural gas, plant condensate, and unfinished oils. Included are imports of fuels into bonded storage and receipts from U.S. territories.

Refiner Acquisition Cost

The cost to the refiner, including transportation and fees, of crude petroleum. The composite cost is the average of domestic and imported crude costs and represents the amount of crude cost which refiners may pass on to their customers.

Released Crude Oil

An amount of crude oil produced from a property in a particular month prior to February 1, 1976, which is equal to the total number of barrels of new crude oil produced and sold from that property in that month. The amount of released crude oil for a property in a particular month shall not exceed the base production control level for that property in that month.

Residual Fuel Oil

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy Special Oil,

Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

Rotary Rig

Machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Separative Work Unit (SWU)

The measure of work required to produce enriched uranium from natural uranium. Enrichment plants separate natural uranium feed material into two groups, an enriched product group with a higher percentage of U-235 than the feed material and a depleted tails group with a lower percentage of U-235 than the feed material. To produce 1 kilogram of enriched uranium containing 2.8 percent U-235, and a depleted tails assay containing 0.3 percent U-235, it requires 6 kilograms of natural uranium feed and 3 kilograms of separative work units (3 SWU).

Stripper Well Lease

A property whose average daily production of crude oil (excluding condensate recovered in nonassociated production) per well did not exceed 10 barrels per day during any preceding calendar year beginning after December 31, 1972.

Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of petroleum hydrocarbons which may be easily substituted for or interchanged with pipeline quality natural gas.

Uncontrolled Crude Oil

That portion of domestic crude oil production including new, released, and stripper oil which, before February 1, 1976, could be sold at a price exceeding the ceiling price.

Unrecouped Costs

Costs which have not been recovered in the current month's product prices but which have been "banked" for later use.

Upper Tier Crude Oil

New crude oil and crude oil produced from a stripper well lease.

Upper Tier Ceiling Price Determination

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest

posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) \$1.32 per barrel.

Well

Hole drilled for the purpose of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic tests, or service wells. This is a standard definition of the American Petroleum Institute.

Explanatory Notes

- 1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear power-plants and industrial hydroelectric power production. The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.
- 2. U.S. imports of fossil fuels include imports of crude oil, refined petroleum products, and natural gas (dry).
- 3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1975 and 1976 electricity imports were estimated on the basis of imports levels during 1974.
- 4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries. NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The NGL stock series shown in this volume includes liquids held as stocks at both natural gas processing plants and at refineries.
- 5. The petroleum short-term demand forecasting model uses historical consumption data to construct a regression equation for each of eight major petroleum products. Each equation attempts to capture the relationship between final demand for that product and the relevant factors influencing that demand. The explanatory factors used in predicting product demand include (1) macroeconomic variables such as disposable personal income and gross national product (GNP), (2) real product prices, (3) variables representing the effects of weather and other seasonal variations in demand, and (4) other factors relevant to a particular product.

The assumptions underlying the current short-term forecast are as follows:

- 1. Normal weather;
- 2. Real GNP growth rate of 6.5 percent for 1976;
- 3. Implementation of the Energy Policy and Conservation Act. Specifically, the composite price of domestic crude oil is set at \$7.66 per barrel beginning February 1976. This price ceiling is permitted to rise with the level of inflation plus a 3 percent production incentive allowance, the total not to exceed 10 per year;
- 4. Elimination of the \$2-per-barrel crude oil import fee beginning January 1976; and
- OPEC maintains a constant real crude oil price from January 1976 through the end of the forecast interval.

The short-term projections are periodically revised to incorporate observed weather conditions and actual values for macroeconomic and other explanatory variables as they become available. This "revised forecast" is termed the "backcast." On page 47 in this issue of the *Monthly Energy Review*, the backcast is solved for December 1975.

The supply model includes an assumed level of domestic crude oil and NGL production and inventory changes. Imports are determined as the incremental supply required to meet total demand for refined products that cannot be satisfied by domestic production or inventory drawdown.

6. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated.

Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted.

7. The Federal Energy Administration and Federal Power Commission began the coordinated collection and compilation of monthly underground storage information from all underground storage operators in the United States in October 1975. Initial storage information reported was for the month of September 1975. Comparable monthly information for total U.S. storage operations is not available for prior periods.

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all native gas in place at the time of conversion to storage, needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas includes the volumes which will not be recoverable upon termination of storage

operations. Working gas is the volume of gas above the designated base gas level available for withdrawal.

8. Bituminous coal and lignite consumption are reported by the Buréau of Mines are derived from information provided by the Federal Power Commission, Department of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disapparance from primary supplies.

Bituminous coal and lignite production is calculated from the number of railroad cars loaded at mines, based on the assumption that approximately 60 percent of the coal produced is transported by rail. Production data are estimated by the Bureau of Mines from Association of American Railroads reports of carloadings.

9. Cooling degree-days can be used as a measurement of energy consumption by air-conditioning systems. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65°F by convention. Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration from approximately 200 weather stations around the country. These data are used to calculate statewide cooling degree-day averages based on the population of the area surrounding each weather station. The population-weighted State figures are aggregated into Petroleum Administration for Defense Districts and the national average, also using a population weighting scheme.

10. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of $U_3\,O_8$. After the conversion stage, the units of measure are either metric tons (MT) of UF₆ or metric tons of uranium (MTU). The latter designation expresses only the elemental uranium content of UF₆.

Following the enrichment stage, the same units are used, but the U-235 content has been enhanced at the expense of loss of material. At the fabrication stage, UF₆ is changed to $\rm UO_2$, and the standard unit of measure is the MTU. We have chosen to present all uranium quantities as MTU; conversion factors to other units are given in the section on Units of Measure.

11. The units used to describe power generation at nuclear plants are all based on the watt, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The thermal rating (expressed in thermal

megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed either as megawatt hours (MWhe) or kilowatt hours (KWhe). Tables in the nuclear section show generated electricity as average electrical power. This enables a more direct comparison to design capacity and to previous months' performances. To obtain the quantity of electricity generated during a given time period (in megawatt hours), multiply the average power level (in megawatts) by the number of hours during that period.

The energy extracted from uranium fuel is expressed as thermal megawatt days per metric ton of uranium (MWD/MTU). The production of plutonium in the fuel rods is expressed as kilograms of plutonium per metric ton of discharged uranium (kg/MTU).

12. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments.

The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately- and publicly-owned establishments which generate electricity primarily for resale.

- 13. The indicator of gasoline consumption per licensed driver is the private and commercial use of gasoline divided by the number of licensed drivers in the United States.
- 14. The indicator of average heat rate for fossil fuel electric utility plants is defined as the number of Btu's of primary fuels required to generate one kilowatt hour of electricity.
- 15. Mileage estimates for 1975 are based on average number of miles traversed per crew day in 1974.

- 16. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected truck stops plus additional retail gasoline dealers that sold diesel fuel. Consequently, diesel fuel prices for January 1975 forward are not exactly comparable to prior data. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.
- 17. The domestic crude petroleum wellhead price represents the first sale price for crude oil and lease condensates. The refiner acquisition cost of domestic crude petroleum is the price paid by refiners for domestic crude petroleum, unfinished oils, and natural gas liquids and includes transportation costs from the wellhead to the refinery.
- 18. The refiner acquisition cost of imported crude petroleum is the average landed cost of imported crude petroleum to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States.

The estimated landed cost of imported crude petroleum from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Carribbean were not included in the landed cost, and costs of crude petroleum from countries which export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

19. The weighted average utility fuel cost for the total United States includes distillate fuel oil delivered to utilities whereas the regional breakdown for residual fuel oil prices represents only No. 6 fuel oil prices.

Units of Measure

Weight

1 metric ton contains 1.102 short tons

Conversion Factors for Crude Oil

Average gravity

1 barrel (42 weighs 0.136 metric tons

gallons) (0.150 short tons)

1 metric ton contains 7.33 barrels
1 short ton contains 6.65 barrels

Conversion Factors for Uranium

1 short ton (U_3O_8) contains 0.769 metric tons of uranium 1 short ton (UF_6) contains 0.613 metric tons of uranium 1 metric ton (UF_6) contains 0.676 metric tons of uranium

Approximate Heat Content of Various Fuels

Petroleum

Crude Oil 5.800 million Btu/barrel

Refined products

6.000 million Btu/barrel Imports, average 5,5061 million Btu/barrel Consumption, average 5.248 million Btu/barrel Gasoline 5.592 million Btu/barrel Jet Fuel, average 5.355 million Btu/barrel Naphtha-type 5 670 million Btu/barrel Kerosine-type 5.825 million Btu/barrel Distillate fuel oil 6.287 million Btu/barrel Residual fuel oil

Natural gas liquids 4.031 million Btu/barrel

Natural gas

Wet 1,097 Btu/cubic foot
Dry 1,024 Btu/cubic foot

Coal

Bituminous and lignite

Production
Consumption
Anthracite

23.73 million Btu/short ton
23.07 million Btu/short ton
25.40 million Btu/short ton

Electricity Conversion Heat Rates

Fossil fuel steam-electric

Coal 10,176 Btu/kilowatt hour Gas 10,733 Btu/kilowatt hour 10,826 Btu/kilowatt hour 10,826 Btu/kilowatt hour Nuclear steam-electric 10,660 Btu/kilowatt hour Hydroelectric 10,389 Btu/kilowatt hour Electricity Consumption 3,412 Btu/kilowatt hour

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
Springfield, Va. 22161

OFFICIAL BUSINESS

PRINTED MATTER

An Equal Opportunity Employer

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-211



Federal Energy Administration Monthly Energy Review

FEA/B-76/329

SEMIENNIA, SE